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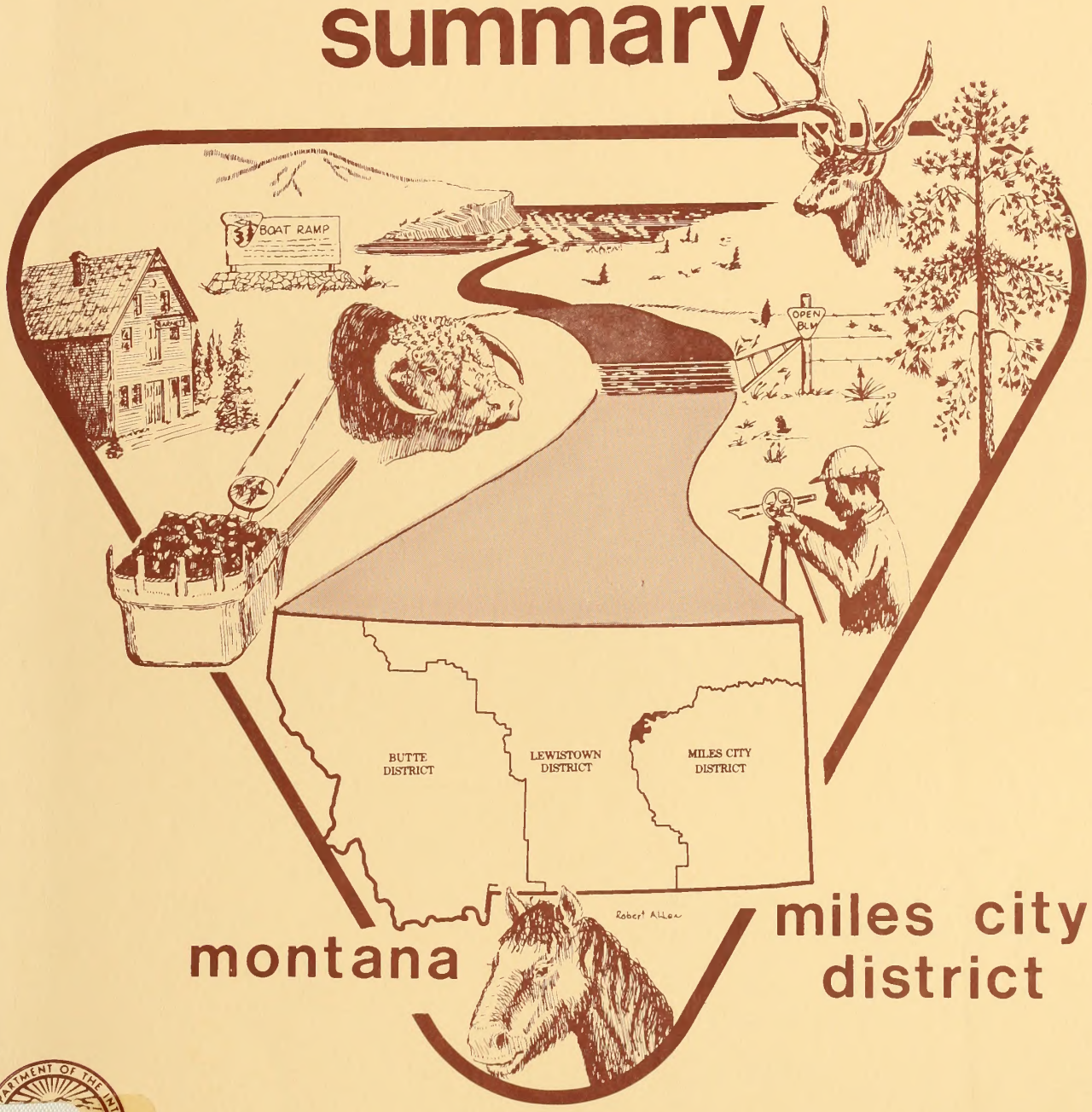
MANAGEMENT FRAMEWORK PLAN

summary



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UNITED STATES DEPARTMENT OF THE INTERIOR
BUREAU OF LAND MANAGEMENT

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MANAGEMENT FRAMEWORK PLAN

SUMMARY

for the

MUSSELSHELL PLANNING UNIT

Department of the Interior
Bureau of Land Management
Montana State Office
Miles City District
Big Dry Resource Area

April 1978

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Preface

The Bureau of Land Management's Montana State organization manages resources on almost 8.4 million acres of surface land and 55 million acres of subsurface minerals in Montana, North Dakota, and South Dakota. The Miles City BLM District Office is responsible for more than 3 million surface and 11.7 million subsurface acres. These public lands are used by many people for a variety of activities. It is BLM's responsibility to develop coordinated land use allocations specifying the guidelines, constraints, and criteria for the utilization or protection of the public's resources.

To better prepare for present and future demands on public lands, BLM has developed land use plans for many areas of the state. This publication contains a summary of the land use decisions for approximately 153,000 acres of public land in the Musselshell Planning Unit.

These decisions, the approved multiple use recommendations of BLM resource specialists and managers, were made after gathering all available resource data, and requesting the viewpoints of local citizens and the user public. Each rancher with an allotment on public lands within the planning unit was contacted during the allotment management plan inventory. Most of the tracts of public land were subject to on-the-ground review.

Several agencies, including Montana Fish and Game, Soil Conservation Service, Fish and Wildlife Service, and Garfield County have furnished data and assistance in this project. Additional valuable input has been obtained by incidental contacts with various interested resource users during the course of development of the planning system over the last several years. Public meetings in Jordan in 1973 and 1978 were held for the purpose of receiving public comments on the multiple use recommendations. By design, the decisions are flexible so they can deal with new demands or new conditions that may arise. They will be updated or revised as necessary to help keep this Management Framework Plan current and effective. Any major changes in this plan will be subject to public review and comment.

In the interest of clarity and brevity, this report is a summary document of the total planning process. The planning effort for the Musselshell Planning Unit began in 1969; this publication summarizes the decisions as they have been finalized in 1977. Detailed maps, physical resource data, and social and economic data are not included in this report. These materials, as well as the other components of BLM's land use planning process, are available for public review during regular business hours at the Miles City District Office. If you wish to review these documents, please make an appointment so that we can have someone available to discuss them with you.

My staff and I thank everyone who assisted in this effort, especially those who attended our public meetings or contributed to the final product. We look forward to working with you again in formulating similar plans or updating older plans as the need arises.

George S. Neuberg
District Manager

Introduction

BLM Planning System

Under the Bureau's planning system, detailed information is gathered and management decisions are developed in eight categories. These categories are lands, minerals, timber, range, watershed, wildlife habitat, recreation, and cultural resources. In order to meet the needs of its diverse public land users, BLM must effectively balance the management of these resources. Under the concept of multiple use management, all potential uses of the public's resources are evaluated before a final management plan is developed and implemented.

The Bureau of Land Management has developed its land use planning system with three major components:

Program Direction
Resource Information
Management Decisions

1. Program Direction. General program direction, policies, goals, and priorities are set by the President, Congress, and the Secretary of the Interior. These directions are expressed in executive orders, laws, regulations, and other documents.

2. Resource Information. In initiating this phase of the planning system, BLM specialists gather all of the available land and resource information relative to the region under study. Each resource specialist--the forester, range conservationist, minerals specialist, watershed specialist, etc.--studies the planning area to determine current condition, use, trends, and problems concerning his resource responsibility. This analysis is then further developed to identify maximum potential for the resource use without consideration of competing or conflicting uses. The importance of this step is that each potential is considered individually. In addition, socio-economic data is gathered and analyzed to facilitate the evaluation of land use alternatives generated by the planning system. In compiling the above information, the Bureau contacts all known interests to be certain that all available data has been obtained.

3. Management Decisions. The next phase of the planning system is designed to resolve resource use conflicts and to provide basic guidelines for the use and management of the public lands under study. This is the

heart of the planning system. At this stage, each resource specialist prepares objectives and outlines specific proposals for the optimum use of his resource based on current technology, Bureau guidelines, and the socio-economic needs of the region. Each individual resource proposal is then fully documented and individually presented utilizing a map and overlay system. At this point, conflicts between various resource proposals and possible multiple use solutions are identified through careful analysis and utilization of narratives, maps, and overlays. Based on comments and information received through public participation, BLM managers are often able to develop modified as well as additional land use alternatives and multiple use solutions. The impacts of each of these alternatives are identified and analyzed to facilitate the selection of the best mix of uses. A comprehensive land use plan is then developed and adopted. Coordinated land use allocations, guidelines, constraints, and criteria for utilization are intrinsic to this plan.

Planning Assumptions

1. Management guidelines set forth in this document apply to public lands and, where appropriate, to those lands where the Federal Government owns the mineral estate. In the Musselshell Planning Unit, the BLM administers approximately 153,000 acres of surface and 217,000 acres of subsurface (mineral estate).

2. All of the guidelines developed in this study are subject to revision as the management climate changes. As data improves, technology changes, legislation is developed, or social demands change, these guidelines will be revised to reflect those changes. Major revisions in program direction will be subject to public review.

3. The implementation of the management guidelines set forth in this document is governed by the availability of manpower and funds.

General Description of the Area

The Musselshell Planning Unit encompasses a region of approximately 368,000 acres in Garfield County, Montana. There are no towns in the unit. The residents, mostly farming and ranching families, define their location in terms of neighboring ranches and landmarks.

The dominant physical features of the unit include the Musselshell River, and the breaks and badlands on the creeks draining north into the Fort Peck Reservoir. Most of the country is a rolling grassland, but stands of ponderosa pine occur on the rougher land of the breaks.

Ranching is the major contributor to the area's economy. Dryland farming commonly supplements range livestock operations.

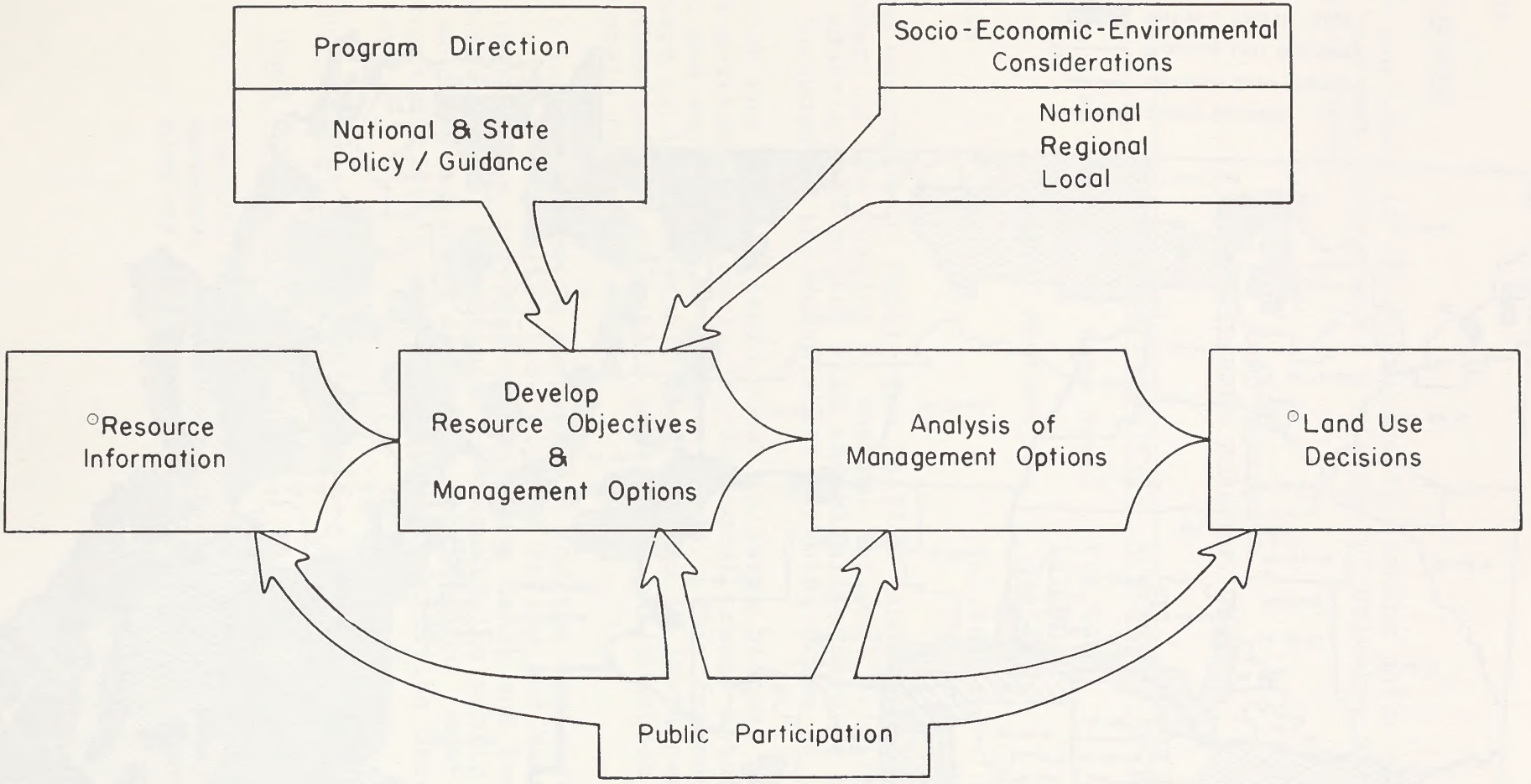
Much of the planning unit consists of intermingled private and public lands, dryland grain fields bordering rugged forests and rangeland.

Major Issues and Problems

Few major social-economic or environmental issues have been surfaced for the Musselshell Planning Unit. The major environmental problem is the control of livestock grazing, since overgrazing contributes to deterioration of practically all resources. Social-economic issues include the expenditure of additional public funds on projects to implement proposed allotment management plans (AMPs) and the associated increase in costs of maintenance and range supervision. Additional impacts would be associated with the creation of proposed wilderness areas.

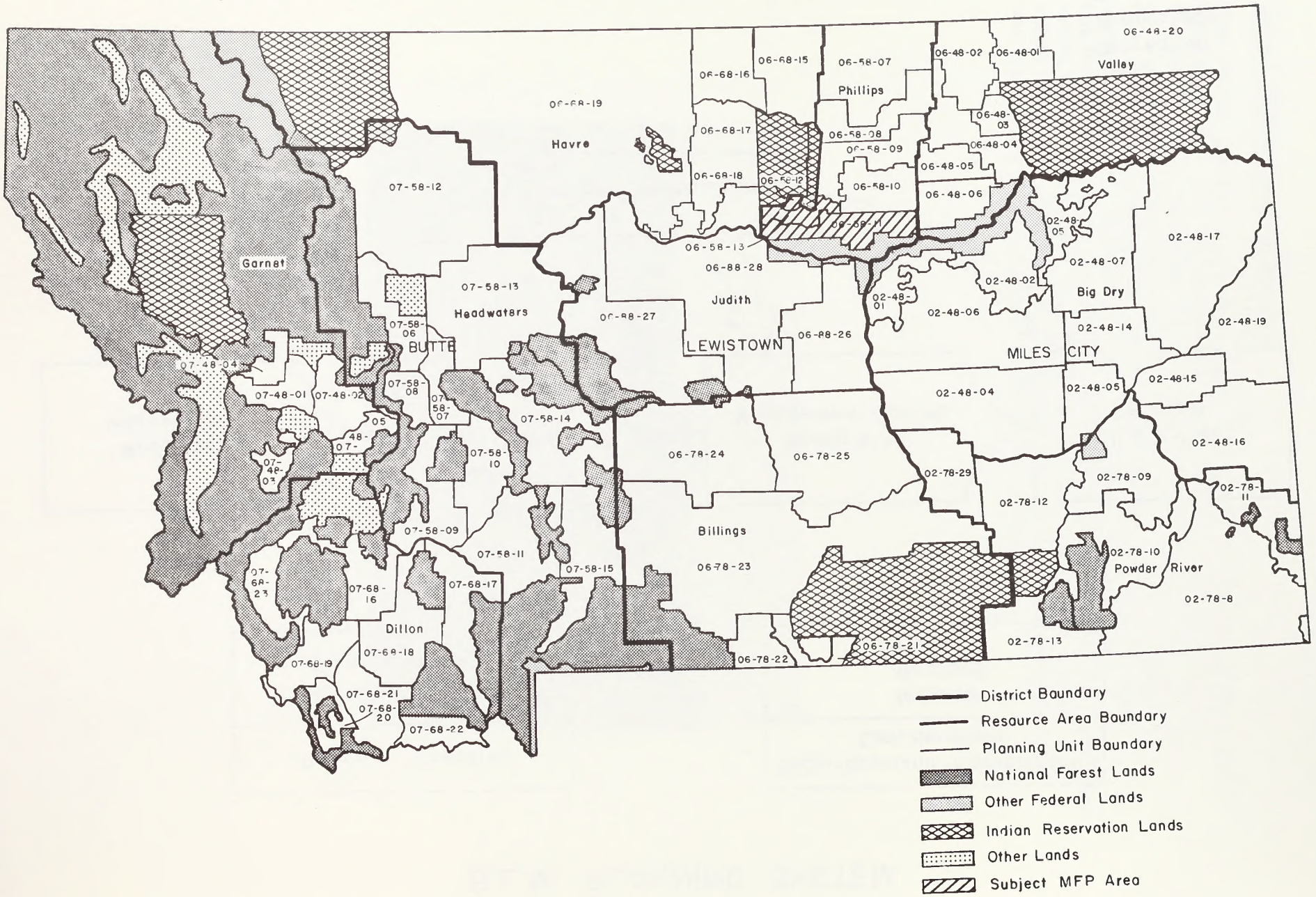
The Musselshell River bounds the western edge of the planning unit--a shallow, meandering stream bordered by cottonwoods and willows, some hay and grain croplands and native range.

B.L.M. PLANNING SYSTEM



°Lands
°Minerals
°Range
°Recreation
°Watersheds
°Timber
°Wildlife

MONTANA PLANNING UNITS



LANDS

Background

Land ownership in the Musselshell planning unit, as shown on the base map, consists of a mixture of private, state, and federal lands.

LAND OWNERSHIP
MUSSELSHELL PLANNING UNIT

	ADMINISTRATIVE AGENCY	ACREAGE	% OF TOTAL ACRE.
Public land	Bureau of Land Mgmt.	152,596	41
Private	Private	197,353	54
State	State of Montana	17,718	5
Totals		367,667	100

Since enactment of Public Law 94-223, lands within the boundary of the Charles M. Russell National Wildlife Range are administered by the Fish and Wildlife Service and are not included in the Musselshell Planning Unit.

Most of the federal lands occur in large blocks, but there is a scattering of small (40-200 acre) tracts intermingled with and surrounded by private lands. This fragmented pattern of land ownership has resulted in instances of unauthorized use of public land, such as livestock trespass and grain farming.

BLM's lands program is responsible for the administration of public land laws. The Federal Land Policy and Management Act (FLPMA) has provided the Bureau's Lands and Realty Specialists with directives for identifying public lands, review of withdrawals and use authorization. Most of the resource decisions stem from FLPMA or existing Bureau policy.

Resource Decisions (& Rationale)

1. Land Identification

   a. Posting of public lands will begin as soon as manpower and funds become available. Areas with a history of unauthorized use will have priority.

b. BLM will continue to provide maps and use local news media to inform people of the public lands status.

Section 201(b) of FLPMA requires the Secretary of the Interior (and therefore, BLM) to ascertain the boundaries of the public lands, and provide means of public identification thereof.

2. Rights-of-way

Rights-of-way will be issued to qualified applicants to cross public land, when the lands are found to be suitable for such use through environmental assessment and managerial decision. There must be a justified need which is in the public interest and compatible with BLM policy of sustained yield and multiple use management.

Where right-of-way grants are discretionary, to the extent it is in the public interest, it is BLM policy to grant requested rights-of-way promptly and with as few restrictions as possible.

3. Disposal

All requests by the general public, local or state governments or other federal agencies to acquire public lands through the Recreation and Public Purposes Act, public sale, exchange or other disposal procedures will be entertained on an individual, case-by-case basis. An interdisciplinary review of the subject lands by a team of resource specialists will be completed prior to the consummation of any disposal action.

According to FLPMA, "the public lands shall be retained in Federal ownership, unless as a result of the land use planning procedures. . . it is determined that disposal of a particular parcel will serve the national interests."

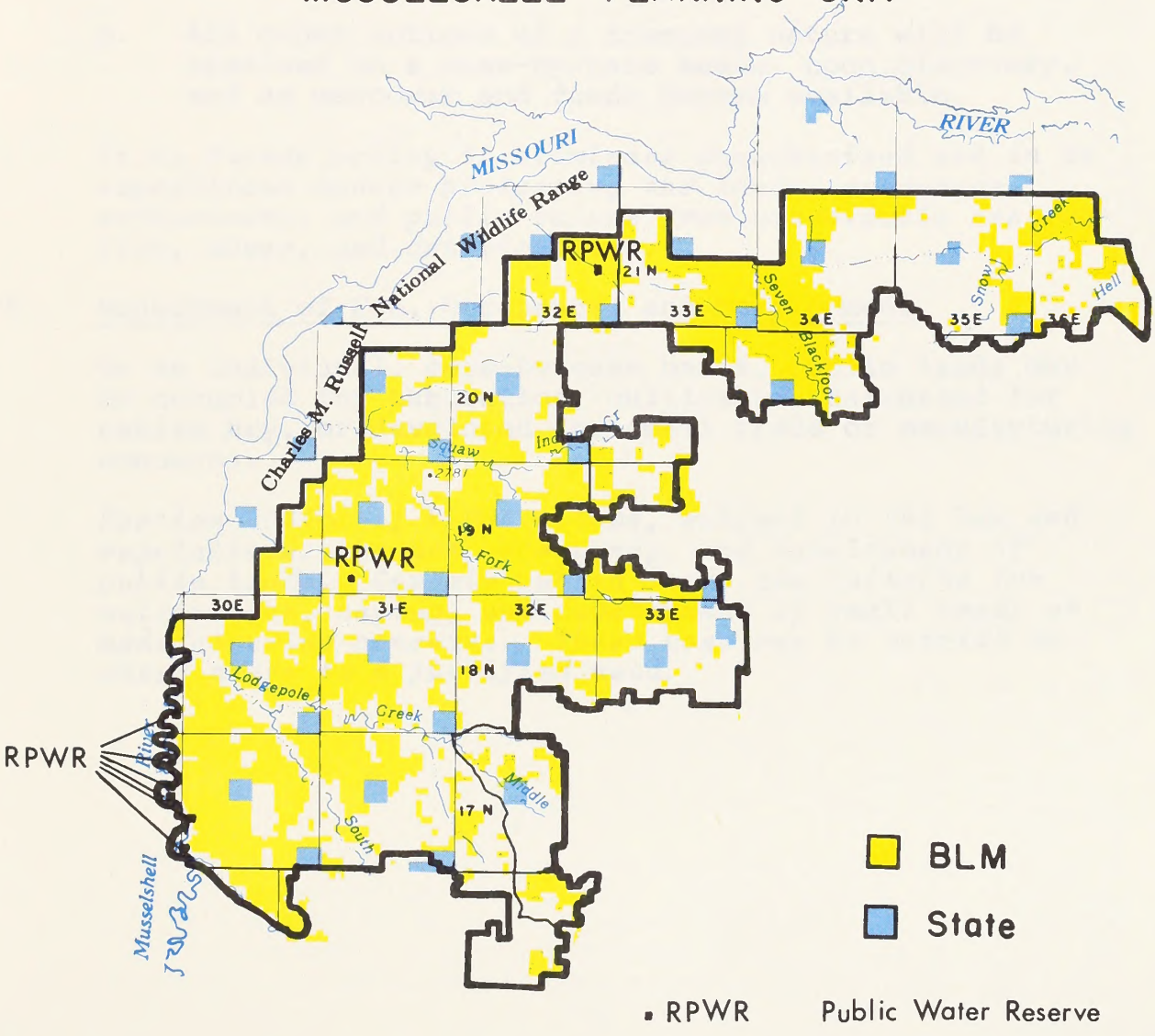
4. Withdrawal Review

The ten areas identified (see map, page 9) as having been withdrawn for public water reserves will undergo "withdrawal review" by 1983.

BLM is required by law to review all withdrawals within 15 years from the date of enactment of FLPMA (10/21/76). The public water reserves were set aside

LANDS

MUSSELSHELL PLANNING UNIT



for public use between the years 1917-1935 and have been excluded from settlement, location, sale or entry. Review of these withdrawals will determine whether any are still being used as originally intended. The result of such review is a recommendation for rejection, extension, or modification of the original withdrawal order.

5. Trespass

a. By September 1, 1978, each of the suspected agricultural trespasses will be resolved.

b. All other actions of a trespass nature will be resolved on a case-by-case basis, upon discovery, and as manpower and funds become available.

It is Bureau policy to eliminate unauthorized use in an expeditious manner protecting the lands, resources, environment, and public values from unavoidable destruction, abuse, and deterioration.

6. Management of Use, Occupancy, and Development

On an individual, case-by-case basis, public lands may be occupied for habitation, cultivated, harvested for native hay, or developed for small trade or manufacturing concerns.

Section 302(b) of FLPMA allows, subject to the law and regulations, the use, occupancy, and development of public lands. Certain public lands are suitable for cultivation, haying, and development of small trade or manufacturing concerns. These uses may be carried on where there is a justified need.

MINERALS

Background

In general, the outlook for mineral development in the Musselshell Planning Unit is dim because of the limited resources. Since all of the bedrock in this planning unit is sedimentary in nature, the chances of finding locatable minerals such as silver, gold, lead, zinc, etc., are slim.

The western part of the Garfield County coal field is within the boundaries of this planning unit. As compared with coal in other fields of eastern Montana, the subbituminous C type coal is thin-bedded and relatively unimportant. Some mineable coal may occur in the northern part of the field, but this would probably be useful only for local and domestic purposes. No exploration, development, or production of coal is occurring within the unit.

To date, only nine oil and gas wells have been drilled in the Musselshell Planning Unit, and all have been dry.

The bentonite in the planning unit occurs as thin beds at the base of the Bearpaw Formation. The Bearpaw Shale is about 1,000 feet thick and only the top of it is exposed. No development of these thin bentonite beds is expected.

Gypsum and anhydrite occur within the planning unit but are very deeply buried and therefore of no economic value at the present time. Future exploration for uranium may be possible since such work has been conducted to the east and west of the planning unit.

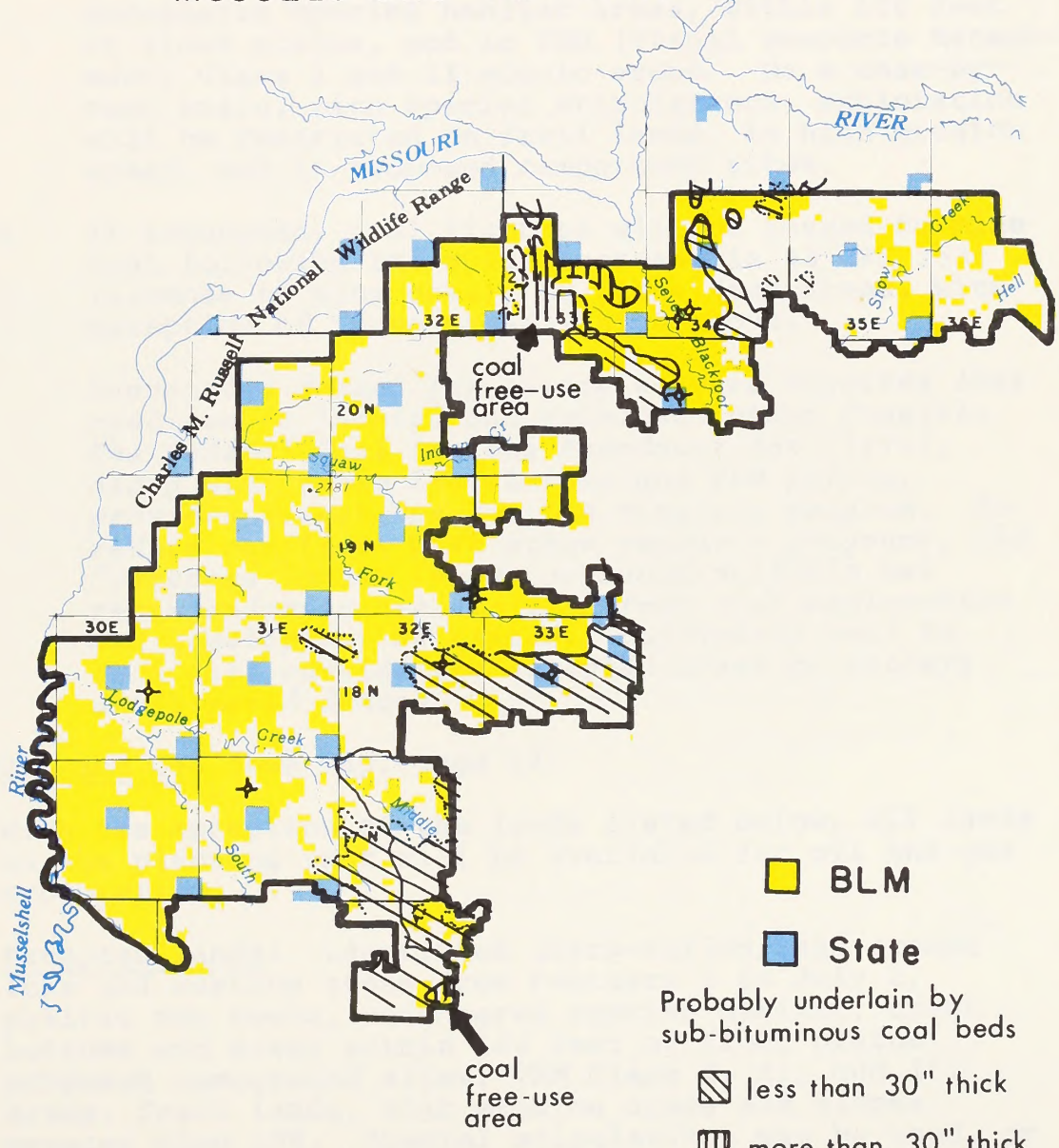
There is very little sand and gravel known to exist in this planning unit, though some alluvial deposits occur along the Musselshell River, between Calf Creek and the South Fork of Lodgepole Creek. No sand and gravel operations are being conducted on public lands in the unit.

Only the northeast portion of the planning unit has been explored for fossil sites, mainly by the Berkeley Museum of Paleontology and the Los Angeles Museum of Natural History. The outlook for finding more significant fossils in the planning unit is promising, since vast acreages remain to be explored.

Minerals development may conflict with other resource programs. The lands excepted from development, in most cases, do not have identified minerals resources. The minerals map, page 12, shows the coal, oil and gas resources known to exist in the planning unit.

MINERALS

MUSSELSHELL PLANNING UNIT



Resource Decisions (& Rationale)

1. Coal (see map, page 12)

   a. Provide for the issuance of coal exploration licenses under existing policy guidelines and regulations.

      Excepted lands: those identified sharp-tailed grouse leks (dancing grounds) and nesting areas from February 1 to July 1, prairie dog towns, endangered species habitat areas, within 100 feet of flood plains, and in VRM (Visual Resource Management) Class I and II scenic areas. On a case-by-case basis, with special stipulations, exploration will be restricted on frail lands, in high erosion areas, and in proposed campground sites.

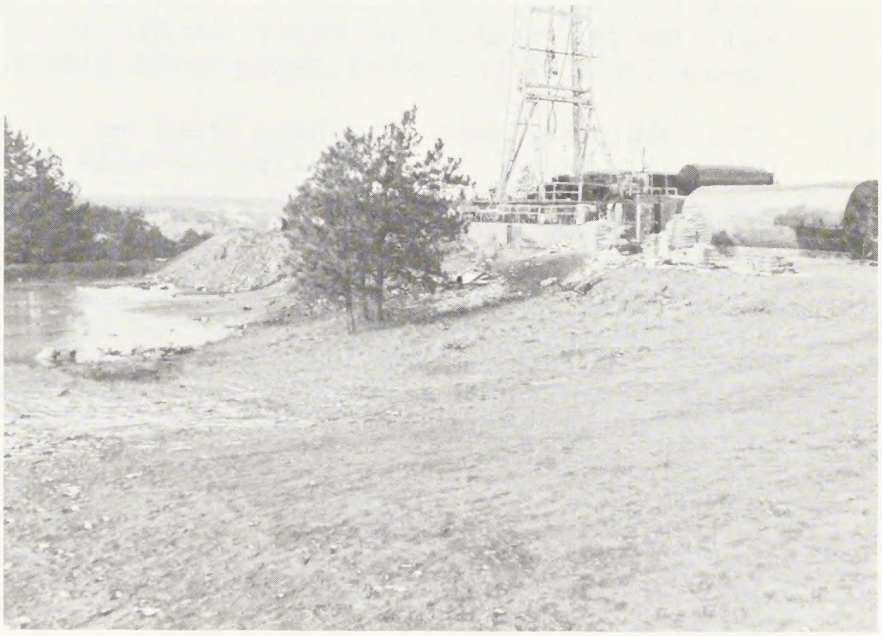
   b. If requested, coal licenses will be issued to mine coal following the guidelines set in 43 CFR 3530 (license to mine coal), in identified areas, with exception of those areas listed above.

      Increasing demand for energy sources requires that reserves be located and extracted where feasible. The Federal Coal Leasing Amendment Act (1976), along with other legislation and BLM policy, provides directives for the minerals program. To reduce conflicts with other resource programs, the "excepted lands" in the approved multiple use recommendation are excluded from coal exploration and development as stated. Sufficient coal is available outside the excepted areas to satisfy anticipated demand.

2. Oil and Gas (see map, page 12)

   With the exception of the lands listed below, all lands in the planning unit will be available for oil and gas exploration.

   Excepted lands: identified sharp-tailed/sage grouse leks and nesting areas from February 1 to July 1, prairie dog towns, endangered species habitat, creek bottoms and areas within 100 feet of flood plains, proposed campground sites, VRM Class I, II, and III areas, frail lands, high erosion areas and slopes greater than 15%. Special stipulations may be used, on a case-by-case basis, to allow exploration on the excepted lands.



Oil and gas exploratory drilling rig and associated sediment pond.

No oil and gas fields have been discovered in this planning unit, though the geologic setting seems conducive to oil and gas entrapment. In order for the United States to pursue a policy of energy independence, it is necessary to find new domestic sources of oil and gas. Management will provide an adequate buffer zone around sharp-tailed/sage grouse leks and prairie dog towns, as identified on the wildlife map, page 35. These areas can be explored from July to February, an adequate time for exploration. The other excepted lands are sensitive year-round and should be protected.

3. Sand and Gravel

a. Field investigations will be made to determine the location of useable deposits of sand, gravel, and scoria. Areas which can be properly developed will be identified.

b. Community pits will be established at selected sites, avoiding identified sharp-tailed/sage grouse leks and nesting areas, proposed campgrounds, scenic overlooks, prairie dog towns, creek bottoms, and areas within 100 feet of flood plains, endangered species habitat, frail lands, high erosion areas, and slopes greater than 15%.

These commodities are scarce within this planning unit and an adequate inventory is needed to identify areas where they could be extracted. There will be a continuing demand for sand, gravel, and scoria for use in construction and maintenance of local, county, and state roadways. The establishment of community pits will alleviate surface disturbance in areas where such development would conflict with other resources and allow for the orderly removal of the aggregate.

4. Gypsum, Anhydrite, Bentonite, and Uranium

The magnitude of these minerals will be determined through a mineral investigation before any public lands are withdrawn or disposed of.

Little is known about the availability of these minerals. However, mineral authorities predict that requirements and demand for mineral commodities will exceed all of the minerals consumed by mankind to date, necessitating the use of much lower grade deposits. Prior to disposal or withdrawal of public lands, the lands should be inventoried for these minerals.

5. Paleontology

a. Paleontological surveys will be conducted to identify areas of fossil concentrations.

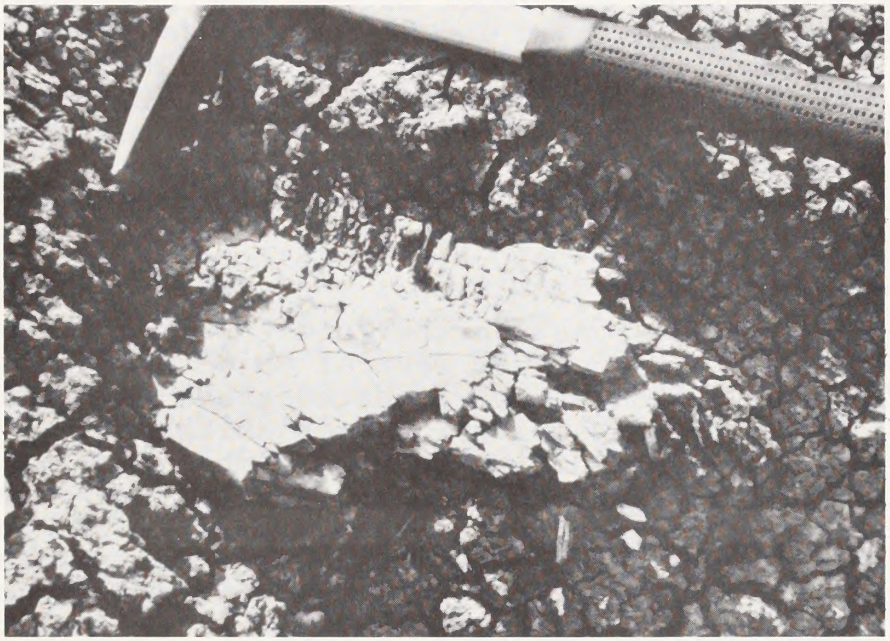
About 80-85% of the planning unit is underlain by the Hell Creek Formation and the Tullock Member of the Fort Union Formation, which contain abundant dinosaur and early mammal fossils.

b. Antiquities permits will be issued to interested universities, museums, and other scientific groups for all public lands in the planning unit, except those lands also excluded from sand and gravel development. On a case-by-case basis, special stipulations may allow exploration on these areas.

According to the Antiquities Act (1906), only qualified groups are allowed to excavate paleontological sites. The issuance of antiquities permits is the Bureau's vehicle for allowing such development. Special stipulations and restrictions will alleviate any potential conflicts with other resource programs.

c. Paleontological surveys will be required prior to any surface disturbance in areas where vertebrate fossil-bearing formations are exposed or lie at shallow depths (to 150 feet).

Such surveys will protect paleontological resources from destruction by surface-disturbing activities.



Fossils from the Hell Creek Formation, such as this Ceratopsian jawbone (Upper Cretaceous age, approximately 70 million years ago) are of scientific significance and protected by law.

FOREST PRODUCTS

Background

Ponderosa pine is the most common forest type on the Musselshell Planning Unit. It is usually found in moderate to dense stands on ridge crests and north/northeast exposures over a full range of slopes. Current demand for timber products from public lands in the unit is low. Timber cut on private lands is used for lumber and construction timbers, posts, small poles, corral poles, sawn shingles and shakes, fuel, and Christmas trees.

The two most important factors affecting demand for forest products are economics and legal access. Merchantable stands are costly to harvest due to low volume per acre, poor quality, small size, and rough terrain. Transportation is costly because of the length of the haul from stump to mill, though some portable mills are operating in the vicinity of the private harvest operations. Less than 10% of the total public lands in the unit are legally accessible, so past sales have relied on the purchaser to obtain the needed access.

The multiple-use decisions for the Forestry program are aimed at the accomplishment of several objectives: (1) inventory and classification of all forested areas on public lands for production capability, (2) establishment of parameters of supply and capability of each timber species for each product and development of baseline data for determining reclamation needs on disturbed sites, (3) protection of existing forests from depletion (with a few exceptions), deterioration and destruction until the resource can be properly evaluated, and (4) preservation of the long-term productivity of forest soils.

Resource Decisions and (Rationale)

1. Inventory

An intensive "in-place" inventory and stand analysis for production (soils and site) capability classification will be completed for all forested tracts of public land.

Inventory and classification is needed to provide baseline data for locating, quantifying, and assessing the production potential of hardwood and conifer forests.

2. Forest Management Plan

A Forest Management Plan for the future harvest and/or protection of timber and other vegetative products will be developed for the Musselshell Planning Unit as forest inventory and capability classification is completed.

A Forest Management Plan will establish the parameters of supply and capability of each timber species for each product and will provide basic data for determining reclamation potential and rehabilitation needs on disturbed sites and for preparing resource activity plans. This plan may include an allowable cut prediction, "in-place" forest products map, harvest schedules and priorities, intermediate silvicultural treatment needs, biological and natural physical interactions, control and salvage, rehabilitation needs, and reclamation potential of disturbed sites.

3. Forest Depletion, Deterioration, and Destruction

a. Existing conifer and hardwood stands will be protected from significant depletion by any land use activity, except for incidental forest product sales to meet local needs after site specific inventory and environmental assessment and in areas where silvicultural needs are clearly evident or can be determined and forest resources can be assessed.

b. Existing conifer and hardwood stands will be protected from significant deterioration by any land use or biological activity (i.e., insects, disease, and animals). Control measures may include the use of approved chemicals.

c. Existing conifer and hardwood stands will be protected from destruction by land use activities (such as uncontrolled burning, utility corridors, and surface mineral extraction) and catastrophic biological interactions (i.e., epidemic bark bettle invasion, widespread porcupine attacks). Control measures may include the use of approved chemicals.

d. All mortality among conifer and hardwood stands (which are accessible and economically feasible) will be harvested. Harvests will be modified to protect other resources.

Stands of Douglas fir and ponderosa pine in the rougher breaks may be of commercial value, however, sales opportunities are limited due to access, low volume timber production per acre and steep slopes.

e. Timber harvests will be conducted in such a manner as to safeguard State and Federal water quality standards and to provide maximum protection of frail sites.

Significant changes in the present character of the forests without baseline data analysis may have irretrievable negative impacts on production and restoration potential. With the conscientious environmental assessment of specific project proposals, adequate protection for all resources should be provided. Interim cutting may be done on a case-by-case basis without deleterious or irreversible impacts on a given stand, by inventorying and classifying production potential on each stand in question. Sufficient timber exists in non-critical wildlife habitat areas and in areas of low visibility to supply incidental demand. Harvests of mortality, especially from catastrophic disturbances, may be accessible and economically feasible. Such harvests would prevent loss of the resource.

4. Soil Conservation and Vegetative Rehabilitation

a. Land use activities will be restricted on frail forest soils (shallow, heavy clays on steep slopes) when they are wet and yielding. The extent and type of restriction will be determined on a case-by-case basis.

b. Land use activities will be restricted on disturbed forest land until the affected areas are rehabilitated. Each situation will be evaluated on a case-by-case basis.

Fragile soils are easily compacted, puddled, cut, and eroded when wet and yielding. Temporary restrictions may be necessary to sustain long-term production on these soils. Disturbed areas may sustain further damage from continued use, i.e., livestock grazing, trailing, ORV use, etc. The National Environmental Policy Act (1969) and FLPMA (1976) provide for protection and rehabilitation of disturbed and damaged land.

c. Disturbed or damaged forest types will be rehabilitated by replanting with appropriate native species.

d. Studies will be conducted to determine the feasibility of reforesting small voids (usually ten acres or less) between natural forest types.

Rehabilitation will prevent further damage and re-establish site productivity. Sound forest management principles include the preference for development of large homogeneous forest areas, rather than small broken forest type "islands." Authority and/or direction for intensive management, protection, and enhancement of this resource is implied in Bureau policy, the Material Sales Act of 1947 and FLPMA.

Ponderosa pine in the Musselshell Planning Unit occurs in scattered unmerchantable stands. These stands will be managed primarily for protection of watershed, wildlife and scenic values.

RANGE MANAGEMENT

Background

Overall, the rangeland in the Musselshell Planning Unit is in good to excellent condition.

There are 38 allotments in the unit, where public lands provide 41.6% of the forage used in the ranching operations. Total licensed use is 23,407 Animal Unit Months (AUMs), with horses, cattle, sheep, and buffalo authorized to graze the federal range.

There are three levels of grazing management intensity on public lands in the planning unit. Allotment management plans (AMPs) have been implemented on three allotments. In the remainder of the allotments, grazing is authorized by license or permit; 22 of these have defined seasons and numbers of livestock, and 14 are licensed (or permitted) on a yearlong carrying capacity basis.

The BLM range program's goal is to improve or maintain existing range conditions and available forage for livestock on public lands. Grazing management systems proposed as a means of reaching this goal will be finalized under Bureau policy and guidelines to insure compliance with NEPA and protection of other resources.

Resource Decisions and Rationale

1. Implementation of Allotment Management Plans

For 18 allotments in the Musselshell Planning Unit, allotment management plans (AMPs) will be developed with grazing systems as a primary means for range improvement.

Recent inventories of these allotments (see map, page 25) have shown adequate public land and resources to be present on each one to justify expenditure of public funds for intensive management systems. Such management may require development of new stockwater reservoirs, wells and pipelines, fences, and other improvements. The Missouri "Breaks" Grazing ES and individual environmental assessments will help BLM managers to implement these plans.

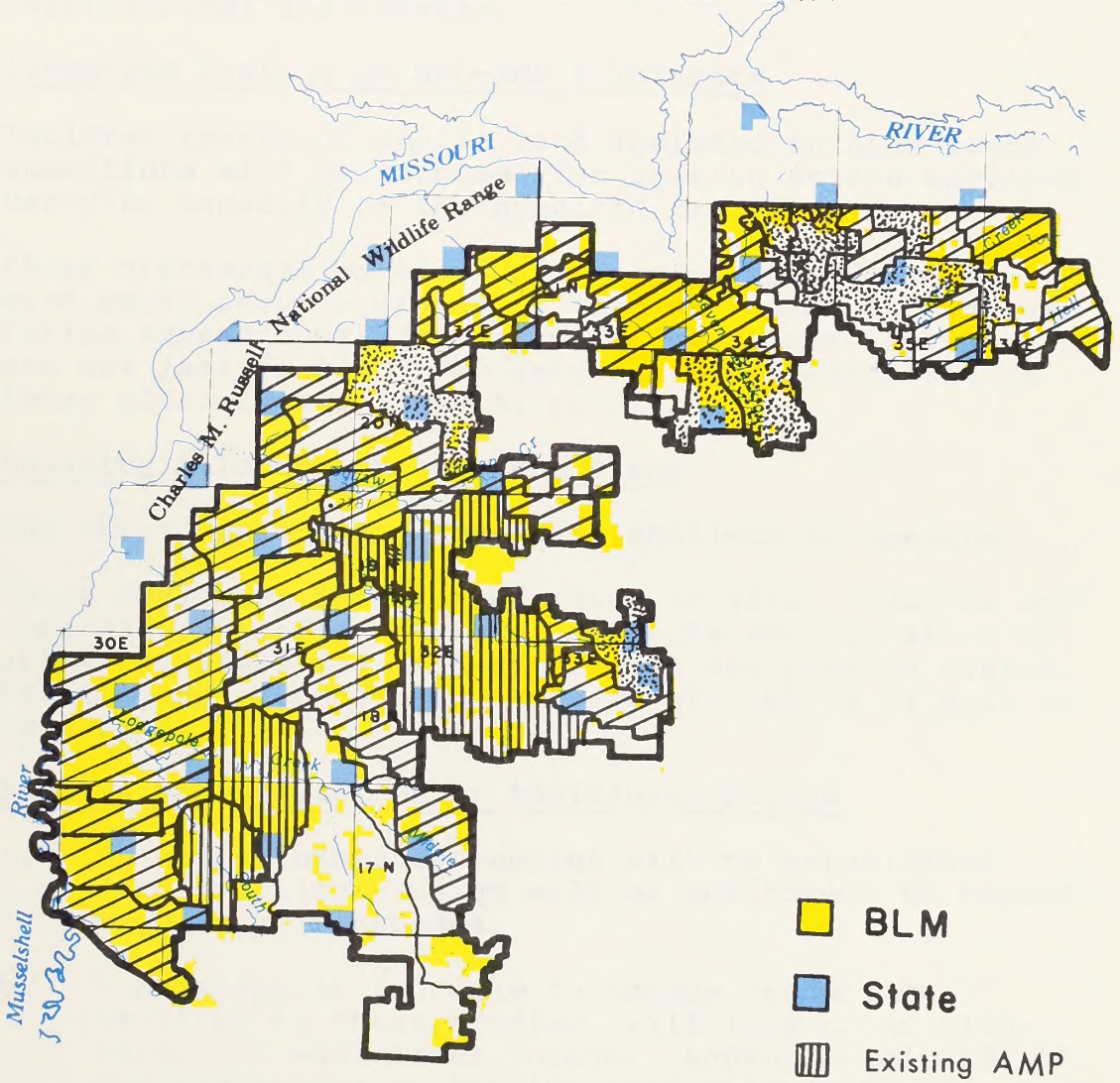
2. Allotment Management Plans Based on Season and Numbers

On seven allotments in the planning unit, livestock use will be authorized under grazing systems establishing specific seasons-of-use for set numbers of livestock.

Cattle grazing on BLM allotment. Public lands provide 42% of forage used in ranching operations in the Musselshell Planning Unit.

RANGE MANAGEMENT

MUSSELSHELL PLANNING UNIT



Overall, these allotments have been found to be in good condition. The existing land ownership pattern and the relatively small acreage of public land within their boundaries does not justify large public expenditures for intensive grazing management systems. Specific seasons and numbers will enhance management by providing definite plans for grazing of an area, and allow BLM to accurately monitor grazing use. Development of some projects (fences, wells, reservoirs, etc.) may be necessary to facilitate grazing management, which will be addressed in the Missouri "Breaks" ES and individual environmental assessments.

3. Livestock Grazing on Non-AMP Allotments

Isolated tracts of public land included in nine ranch operations will be licensed for grazing at the surveyed carrying capacity of the specific tracts.

These allotments consist primarily of deeded lands, with small amounts of public land scattered throughout. Public expenditures for intensive management systems are not justifiable. The existing range condition on these allotments is fair to good.

4. Existing Allotment Management Plans

The three implemented AMPs will continue to operate.

These AMPs were implemented prior to 1975. Studies and observation to date indicate adequate consideration of other resources was incorporated in the grazing system. Existing range condition on these allotments is good to excellent.

5. Studies and Allocation of Additional Forage

a. On all allotments, studies will be established (and existing studies will be monitored) to record vegetative responses.

b. A substantial increase in forage production, verified by these studies, will lead to an allocation of additional forage. Approximately 60% of the additional vegetative production will be reserved for improved watershed and wildlife habitat conditions, and 40% will be allowed as usable livestock forage.

Through implementation of AMPs and grazing systems, the vegetation on some allotments will improve toward its potential, based on site capability. Improvement in vegetative condition will benefit other resources, and these resources must be considered in decisions to allow additional grazing on an allotment. All decisions should be based on sound information, as provided by range and watershed studies.

6. Prescribed Burning and Thinning

Prescribed burning and/or mechanical thinning, whichever is deemed the proper method, will be used to increase vegetative growth on overaged "doghair" pine stands. Prior to implementation, a report will be issued (by a team of various resource specialists) that identifies sites suitable for treatment.

Prescribed burning can be a management tool to improve habitat for wildlife and livestock forage. Most of the areas which have been identified for study (see map, page 25) are small in size and can easily be monitored for effects of the treatment.

Differences in management frequently result in "fenceline contrasts" as demonstrated here.

WATERSHED

Background

BLM's watershed specialists deal with problems of erosion, water quality and water yield of both surface and subsurface sources.

The soils in the planning unit are predominately heavy clays, with high shrink-swell capacity, low infiltration rates, and high salt content. Precipitation averages 11-12 inches per year. Runoff is low and fluctuates with precipitation events. The soils and the climate are the largest factors influencing erosion and water quality in the area.

From the present data, the erosion trend for the planning unit is thought to be stable or slightly improving. Erosion trend is shown on the map on page 30. Severe or critical erosion conditions occur only in areas of geologic erosion along the "major drainages." There are a few areas where erosion is being accelerated by land use, i.e., poor farming practices, poor road design or overgrazing. These areas are relatively small in acreage and have not been recorded or measured.

There has been no water quality sampling done in the area. General observation indicates that runoff waters are of low quality, high in dissolved solids and suspended sediment. Surface water yields have not been measured but are estimated at 1.27 cm/acre/year. The multiple use decisions for this resource program will meet two major objectives: (1) to protect or improve the watershed condition, water quality, and water yield of the planning unit, and (2) to undertake an intensive inventory of the present watershed condition and water resources of the planning unit.

Resource Decisions and Rationale

1. Management of K-4 (Restricted Use) Areas (see map, p. 30)

   a. Mechanical disturbance, such as road and trail construction and fire line construction with heavy equipment will be eliminated, except in extreme cases where more damage would result from alternate proposals.

   b. Livestock grazing will be managed so that only incidental use of the K-4 areas occurs.

These areas are unstable and any surface disturbance accelerates erosion. Road construction (using special techniques) across a small part of this fragile area may be preferable to a much larger impact resulting from development of an alternate route. Off-road vehicle use and livestock grazing should also be restricted since (on frail soils) these activities contribute to erosion and watershed deterioration.

c. Existing roads and trails which are eroding badly and contributing to a high sediment yield will be closed, relocated, or redeveloped with sediment control structures.

d. Disturbed areas will be rehabilitated.

Many roads are presently in highly erosive areas and are contributing to soil loss and sediment yield. In many cases, these roads can be closed or relocated without creating an access problem. Where closure or relocation is not feasible, sediment control structures would hold the sediment on site. By reseeding disturbed areas, improved vegetative cover will act to reduce the soil's exposure to wind and water-caused erosion.

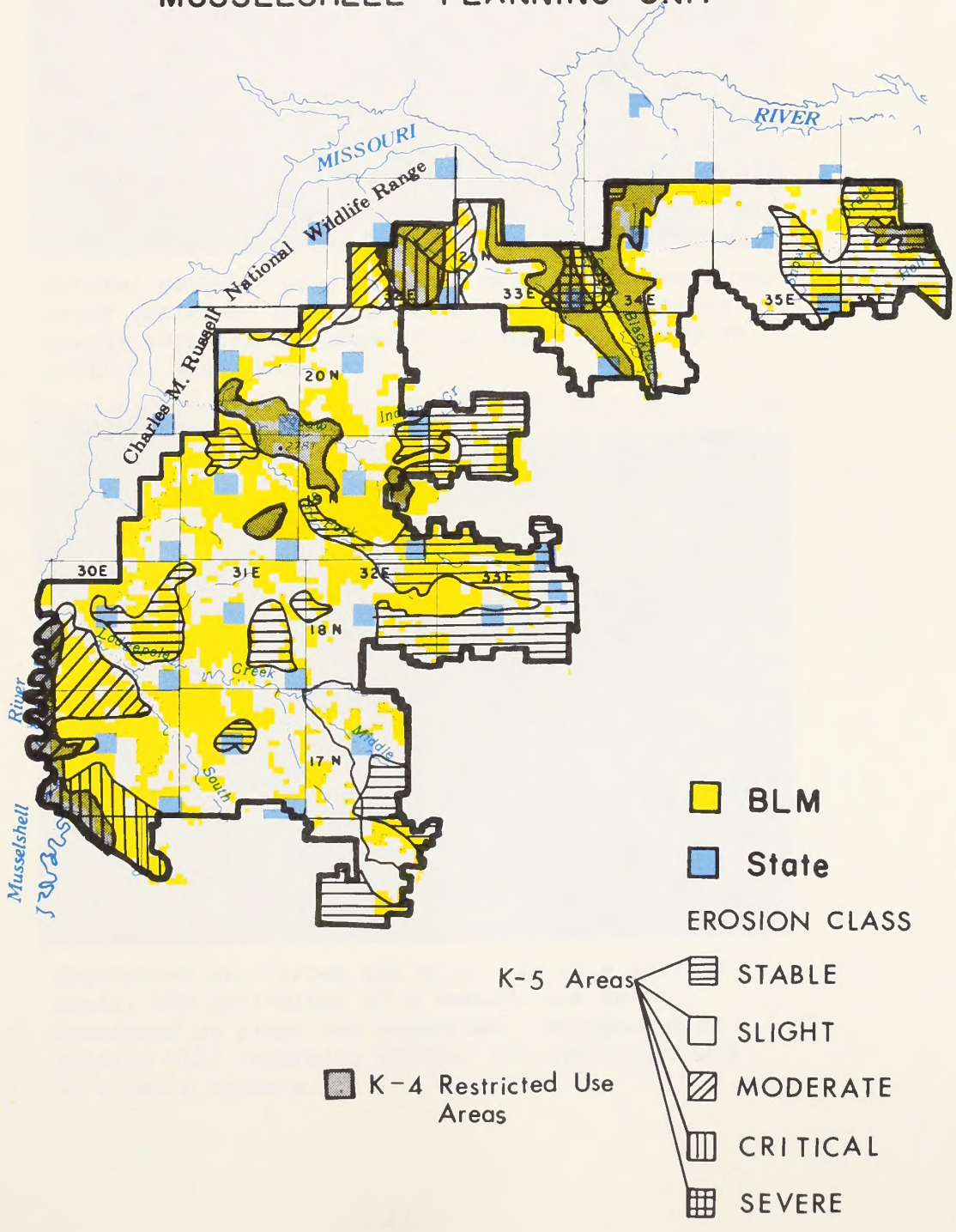
2. Management of K-5 (Management) Areas (see map, page 30)

a. Surface disturbance, such as road and trail building in unstable areas, will be kept to a minimum through careful planning of each development and followup with rehabilitation of the disturbed areas.

b. Existing roads and trails contributing to excessive erosion and sediment yield will be closed or reconstructed to correct the situation.

The majority of this area is in a slight or moderate erosion condition. However, it is an area of high erosion potential and some areas of yet unidentified severe or critical erosion condition undoubtedly exist. Mechanical disturbance, particularly during times of high soil moisture content and on slopes steeper than 15%, accelerates erosion on unstable areas, necessitating some form of protection to reduce soil loss and sediment yield.

WATERSHED
EROSION CLASS
MUSSELSHELL PLANNING UNIT



Natural geologic erosion along major drainages along major drainages (as shown here on Seven Blackfoot Creek) accounts for most of the areas of severe or critical conditions.

Vegetation stabilizes the soil: in this shallow swale, the beginnings of a headcut are being countered by grass and sagebrush. Management of grazing will determine whether the grass persists or a gully appears.

3.

a. Public lands suitable for cultivation will be inventoried and the suitability of the available water quality and quantity will be determined.

P.L. 94-579 (FLPMA) states that the Secretary of the Interior may develop public lands for cultivation. This implies the need to identify lands that are irrigable and reserve all waters which will be needed for irrigation should these lands be developed.

b. Surface water of the Musselshell Planning Unit will be characterized by reservoir sediment studies, channel condition surveys, stream sampling, and crest-stage gauges.

c. Aquifers will be characterized by a well log survey, other available data, and on-site investigation.

d. A long-term stream gaging station will be located on a watershed which will be fully covered by allotment management plans.

Surface and ground water information is required as background for sound management decisions dealing with most resource programs. The Federal Water Pollution Control Act (P.L. 92-500) requires knowledge of existing condition and maintenance or improvement of that condition in the future. These methods will provide an adequate data source and enable monitoring of future changes in the condition of the water resource in the planning unit.

e. Riparian vegetation and the instream needs to maintain or improve this vegetation will be identified.

Riparian vegetation is important to stream channel condition. In some cases, the instream needs to maintain this vegetation must be reserved under state law.

WILDLIFE

Background

The diversity of vegetation types associated with agricultural crop production, the rolling prairie, and the steep slopes and flat creek bottoms of the Missouri River "Breaks" provides a well-balanced variety of wildlife habitat. Principal big game species in the planning unit are mule and white-tailed deer and pronghorn antelope. Upland game birds include sage grouse, sharp-tailed grouse, Hungarian partridge, Merriam's turkey, and ring-necked pheasant. Waterfowl (ducks, geese, and swans) pass through the area on their seasonal migrations and the ponds, streams, rivers, and reservoirs serve as their breeding grounds and staging areas. Among notable nongame species are the coyote, black-tailed prairie dog and golden eagle. Rainbow trout and largemouth bass have been stocked in a number of small reservoirs in the area.

The Musselshell Planning Unit contains potential habitat for several endangered or threatened wildlife species. These species are the black-footed ferret, whooping crane, and American peregrine falcon. Their occurrence has not been documented and research is necessary to determine if they are present during any part of the year.

Recreational value of the wildlife resource can be expressed in terms of days of use, though non-hunters are not documented.

WILDLIFE	HUNTER-DAYS
Antelope	139
Deer	1,066
Upland Game	1,201
Fishing	648
Total	3,054

Due to the demonstrated importance of wildlife to the area economy and to Montana as a whole, the protection and development of crucial wildlife habitat is considered a prime objective in overall planning.

1. Studies and Research

   Game and non-game wildlife species and fisheries will be inventoried and wildlife populations and habitat will be monitored for change. The economic demand for wildlife will be assessed, along with the economic

significance of the wildlife resource and the social impacts of the wildlife-related activities in the planning unit.

Inventories and basic wildlife research provide the baseline data needed to arrive at adequate management decisions. FLPMA, the Taylor Grazing Act (1934), the National Environmental Policy Act (1969), and the Endangered Species Act (1973) all imply the need for basic information prior to management decisions.

2. Habitat Expansion

a. Habitat expansion programs, such as acquisition of land, transplanting terrestrial wildlife, and stocking of streams and reservoirs, will be pursued once studies have shown these programs to be necessary and feasible.

b. In suitable areas, canals, level ditches, water control dikes, etc., will be constructed for waterfowl habitat.

By creating new surface water and wetland areas, the overall carrying capacity (for waterfowl) of the planning unit can be greatly increased. This type of habitat development compliments the general increase in demand for all types of wildlife.

3. Habitat Improvement

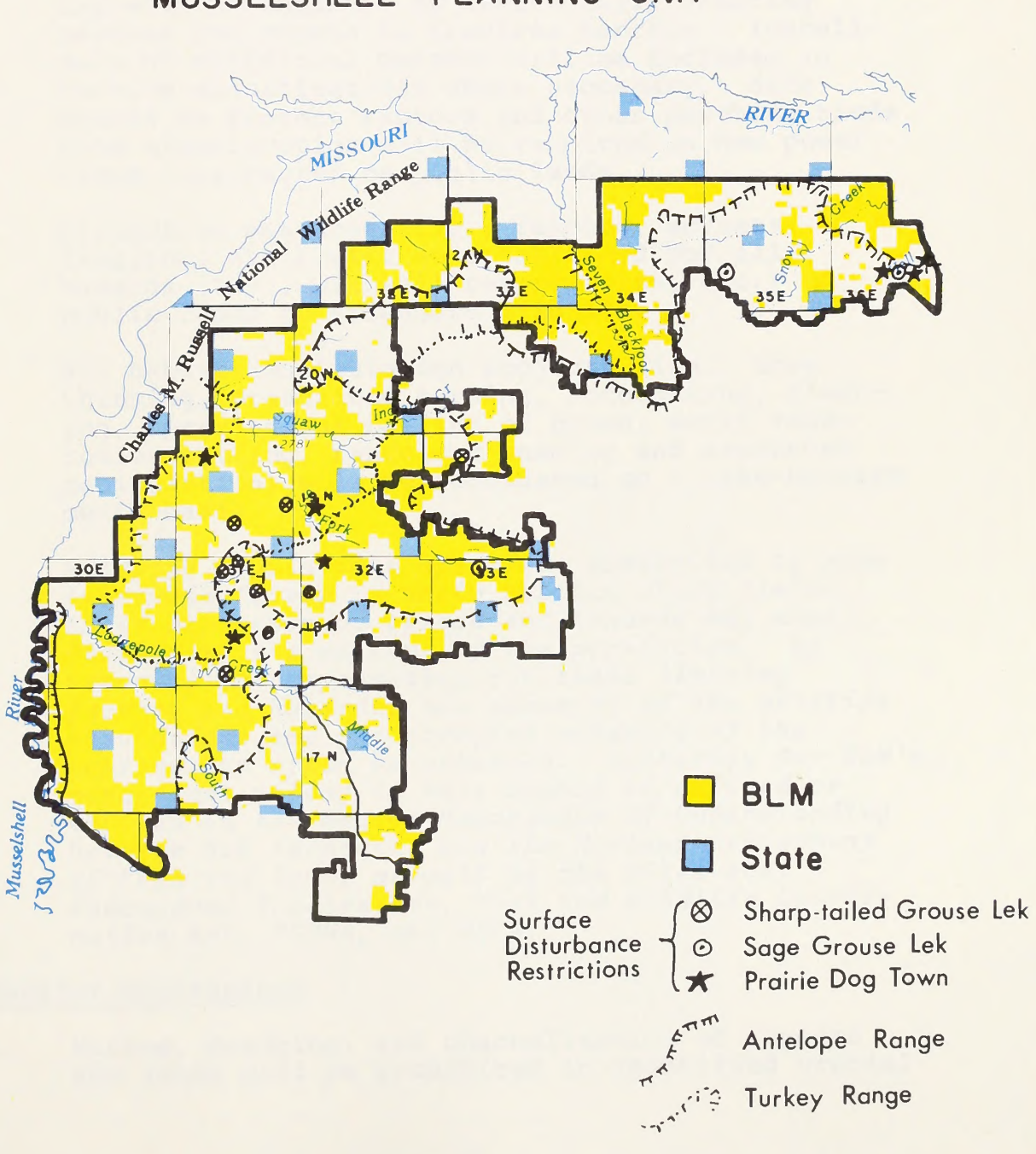
a. Fish shelters, "instream" habitat improvement devices (i.e., dams, flumes, deflectors), plantings of aquatic, emergent, and riparian vegetation and fertilization of fish ponds, and control (as possible) of water levels will be used to improve the quality of the aquatic wildlife habitat in the unit.

b. Plantings of food, cover plants, and provision of salt and grit, as appropriate, will be done in areas managed intensively for terrestrial wildlife. Applicable water sources will be developed to provide supplemental water for wildlife and bird escape ramps will be constructed and installed in all stockwatering tanks on public lands.

c. Goose nesting islands, waterfowl nesting platforms, baskets, boxes, and loafing rafts, as appropriate, will be constructed concurrently with

WILDLIFE

MUSSELSHELL PLANNING UNIT



all new reservoirs, excepting those determined suitable for fisheries. As appropriate, these measures will be implemented on existing reservoirs.

d. Brush piles will be developed, as appropriate, for nesting cover of upland game birds and waterfowl.

e. Artificial nesting platforms and substrates will be provided for raptors at locations where nesting sites are deemed a limiting factor. Raptor habitat will be enhanced by artificially creating perches and roosts in treeless terrain. Installment of artificial perches will be included in fencing specifications where necessary. Safeguards to protect raptors and other perching birds from electrocution will be required on new power lines constructed on public lands.

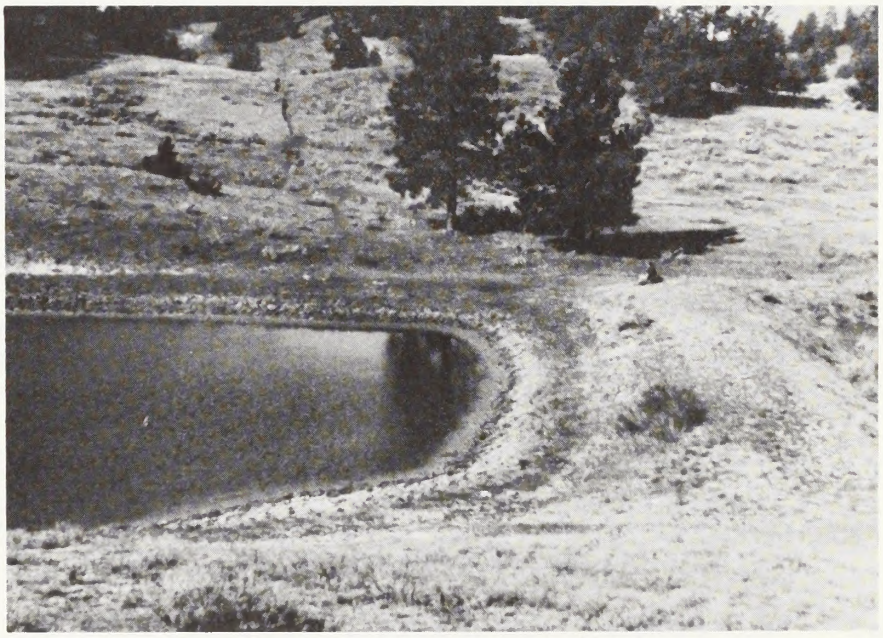
f. Protective measures (i.e., fencing, screens, flagging, etc.) will be established for all hazards (i.e., oil well reserve pits, etc.) on public lands to safeguard wildlife.

g. All habitat manipulation projects (i.e., tree thinning, prescribed burning, rotobeating, cleaning, spraying and railing of brush, marsh vegetation cutting, rangeland seeding and sagebrush manipulation) will be considered on a case-by-case merit basis.

Wildlife populations are often controlled by some intrinsic factor in their habitat which limits their expansion or spread and hazards may also jeopardize the welfare of the population. By removing or compensating for these limiting factors and hazards, the security of the wildlife populations and the carrying capacity of the habitat can often be enhanced. Authority for BLM's management policy in this regard is defined or implied in the Master Memorandum of Understanding between BLM (Montana) and the Montana Department of Fish and Game, as well as the Sikes Act, Endangered Species Act, Fish and Wildlife Coordination Act, FLPMA, and NEPA.

4. Habitat Maintenance

a. Mining, dredging, and channelization of streams and lakes will be prohibited in identified crucial



Reservoirs originally constructed for purposes of providing livestock water also have value for wildlife as a source of free drinking water, waterfowl habitat and in some cases, fisheries.

wildlife habitat and important use areas in the planning unit. Any potential dewatering projects will be evaluated on a case-by-case basis. After completion of the identified water-oriented studies, a prioritized list will be developed for projects needed to fence selected streams and reservoirs with a fishery or waterfowl potential and development of supplemental watering facilities as necessary.

b. Haying, burning, logging, etc., will be restricted along stream sides and water bodies in the planning unit, unless these activities are part of a planned habitat improvement project for wildlife. Buffer zones or green belts will be created, as appropriate, along streams and reservoirs. Vigor of brush species on important wildlife use areas, especially coulee bottoms, will be improved by removal of livestock, either seasonally or year round, as necessary. No surface occupancy for oil and gas exploration will be allowed within 100 feet of creeks or flood plain perimeters, whichever is farthest.

c. Known wildlife nesting and roosting trees and cavities, as well as known wildlife "snags," will be maintained, and protected from any man-caused physical disturbance.

d. Occupancy for surface disturbance purposes will be restricted or limited in known crucial habitat areas.

e. On turkey range, stands of ponderosa pine will be maintained at optimum levels of density (semi-open pole stands and some "dog-hair" stands) for protective cover and security for turkeys.

f. Livestock grazing on public land will be managed to allow for optimum residual wildlife nesting, brooding, escape cover, and ample wildlife forage. Livestock control by range retirement measures will be undertaken only if the desired protection cannot be achieved through grazing system manipulations or range improvement projects. Fences on public lands will be located and designed to restrict movement of wildlife as little as possible.

g. Normal (endemic) spread of insects and disease will be allowed in forested areas. On a case-by-case basis, fires in forested breaks may be allowed

to burn until they can be controlled on natural fire lines, and unburned areas may be left within the fire line.

h. Artificial land treatments (contour furrowing, interseeding, etc.) will be considered on a case-by-case basis.

The concept of maintaining ecosystem integrity by constraining surface disturbances to only those measures absolutely necessary for logical resource management is endorsed and mandated by state and federal laws. Ecosystem maintenance is directly related to the health and abundance of wildlife populations.

5. Endangered Species

a. If management restrictions are insufficient for protection of identified endangered species habitat, those public lands will be legally withdrawn from any uses which jeopardize these habitat values.

b. BLM will participate in recovery plan implementation for endangered species on public lands in accordance with time frames identified in each recovery plan.

c. Black-tailed prairie dog towns will be maintained by restricting surface occupancy.

Prairie dog towns are critical habitat for black-footed ferrets.

d. Stringent law enforcement measures will provide protection of known endangered species habitat.

Endangered species are those that require some special management consideration to maintain their populations at stable or improving levels. To safeguard endangered species habitat, special management emphasis and measures are directed toward these habitat areas. Authority for this management emphasis is derived from the Endangered Species Act, FLPMA, and NEPA.

6. Animal Damage Control

Those species commonly known as predators will be recognized and managed for the public benefit. Excessive damage to livestock or game animals will be

controlled as necessary only by the appropriate state or federal agency, using approved methods, in accordance with a comprehensive plan.

Wildlife species known as predators help meet local and regional demands for wildlife-based recreation (i.e., hunting, trapping). In order to insure the safety of the public, and to prevent unnecessary killing of animals other than target species, all control work must be competently supervised. A planned approach to administration of animal damage control measures on public lands will consider the welfare of the ecosystem at large and efforts can be directed to specific problems. This approach is supported by the Migratory Bird Treaty Act, Bald Eagle Protection Act, NEPA, Federal Insecticide, Fungicide and Rodenticide Act, Federal Environmental Pesticide Control Act, Toxic Substances Control Act, Endangered Species Act and Executive Orders 11643, 11870, and 11917 (Environmental Safeguards on Activities for Animal Damage Control).

7. Pesticides, Rodenticides, Fungicides, and Herbicides

a. Only approved insecticides (with proper application) will be allowed on public lands.

The detrimental effect of chlorinated hydrocarbons on the reproductive efforts of birds has been extensively documented. The most noted vegetative effects have been recorded for peregrine falcons, bald eagles, osprey, and pelicans. The Musselshell Planning Unit is within the existing or potential range of all these species.

b. The use of selective, non-toxic control measures (i.e., shooting, trapping) will be encouraged as the primary approach to prairie dog control, when needed. "Perimeter control" of prairie dog towns will be employed as the primary means of eradication. Absolutely no rodenticides will be used within five miles of known black-footed ferret habitat.

By exercising selective control on an "as needed" basis, the basic prairie dog town ecosystems and complexes can be preserved. The removal of chemical control from most situations eliminates a very dangerous environmental hazard and encourages a more discriminatory approach to control activities.

The breaks provide deer and other wildlife with diverse habitat opportunities for

c. The most applicable and least damaging methods will be used to control weedy species on public lands (after analyzing their positive/negative values).

Montana State law requires aggressive control of officially recognized noxious weeds. State and Federal environmental laws also require the evaluation of actions causing environmental degradation. Many "weed" species are important food items in the wildlife diets and provide cover for ground-nesting birds, small mammals, and reptiles.

8. Water Quality

The use of chemical toxicants and mechanical pollutants will be prohibited in or immediately adjacent to streams, lakes, or ponds within the planning unit.

Many pollutants can be activated by water or carried to areas where their presence is undesirable. By keeping these materials out of the water and far enough away to prevent their entry, this hazard can be minimized. Legal authority comes from, among others the Federal Water Pollution Control Act, Watershed Protection and Flood Prevention Act, Water Quality Act, Clean Water Restoration Act, and NEPA.

9. Habitat Management Plans

Habitat management plans (HMPs) will be developed on areas identified as meeting qualifying criteria.

By developing HMPs on areas to be intensively managed for wildlife, emphasis and priorities can be identified and programmed for the benefit of wildlife habitat and populations.

10. Program Coordination

a. BLM will work closely with the Montana Fish and Game Department, U.S. Fish and Wildlife Service, U.S. Geological Survey, U.S. Corps of Engineers, and Bureau of Reclamation on inventories, developing seasons, bag limits, planning projects, etc.

Overutilization of forage by wildlife contributes to deteriorating habitat, range, and watershed conditions. It is desirable to maintain a balance

between kinds of game animals to avoid unnecessary competition for habitat. The same areas that are important to wildlife are also important to other resources so coordination of programs will assure a coherent and complimentary approach to land use where wildlife habitat and populations are concerned.

b. Cooperative signing agreements, rights-of-way, legal access agreements, etc., will be used to assure general access to public lands with consideration for a quality type wildlife and recreation experience.

Access to public lands will encourage adequate harvest of game animals and realization of recreational potential of all forms of wildlife.

Sage grouse engaged in "strutting" activity as a part of their mating ritual. Sage and sharptail grouse leks (strutting and dancing grounds) are identified on the wildlife map, page 35.

Sage grouse prefer areas of sparse vegetation for leks to enable high visibility of approaching predators. Known wildlife nesting and roosting areas will be maintained and protected from any man-caused physical disturbance.

RECREATION

Background

In the Musselshell Planning Unit, 3,580 visitor days (in 1976) were attributed to public land. Over the next ten years, this visitation is expected to increase by 22%. Information at hand suggests that visitor use in the planning unit is highly seasonal, with most of the pressure coming from hunters in the fall; however, non-consumptive and hobby-type recreational activities are not being inventoried at this time.

The trend for increasing recreational use of public lands, land use legislation, and Bureau policy all necessitate a closer examination of recreation management. The approved multiple-use recommendations (decisions) for the recreation resource provide the BLM with a plan for inventory and action.

Resource Decisions and Rationale

1. Campgrounds

   a. Study visitor use distribution by season, type, and location.

   b. Inventory each potential campsite (as shown on map, page 46).

   c. Develop a prototype design for the proposed campsites.

   d. Sites which are chosen for development will be considered for withdrawal from conflicting resource uses, where multiple use would detract from the recreational experience of the visitor.

      Presently, there are no developed campsites in the planning unit. In accordance with the Bureau's policy of providing quality recreational experiences to public land users, and under FLPMA directives, the BLM should establish a controlled campground program within the planning unit to satisfy visitor needs for overnight facilities in the area.

2. Fishing, Reservoirs

   a. Study the demand for reservoir fishing.

b. As reports from the Montana State Department of Fish and Game become available, BLM wildlife biologist will compile a master list of reservoirs capable of supporting fish.

c. Reservoirs capable of supporting fish will be placed on a prioritized list for programs of fish stocking.

d. Public access will be secured to those reservoirs selected for fisheries development to meet identified demand for reservoir fishing in the area.

The Musselshell Planning Unit has an abundance of reservoirs which were initially developed for livestock water, with fishing as a secondary consideration. The Montana State Department of Fish and Game is in the process of inventorying these reservoirs to determine their fisheries potential. Fish stocking should proceed in a logical system, depending on financial, social, and supply/demand constraints.

3. Visitor Use Management

a. Continue to develop a recreation information program, including signs, maps, brochures, news releases, and public meetings.

To meet requirements of FLPMA and BLM policy, the Bureau must balance consumptive use with resource capabilities. Innocent conflict situations might be avoided if the public is kept aware of Bureau policy, regulations, location of public lands.

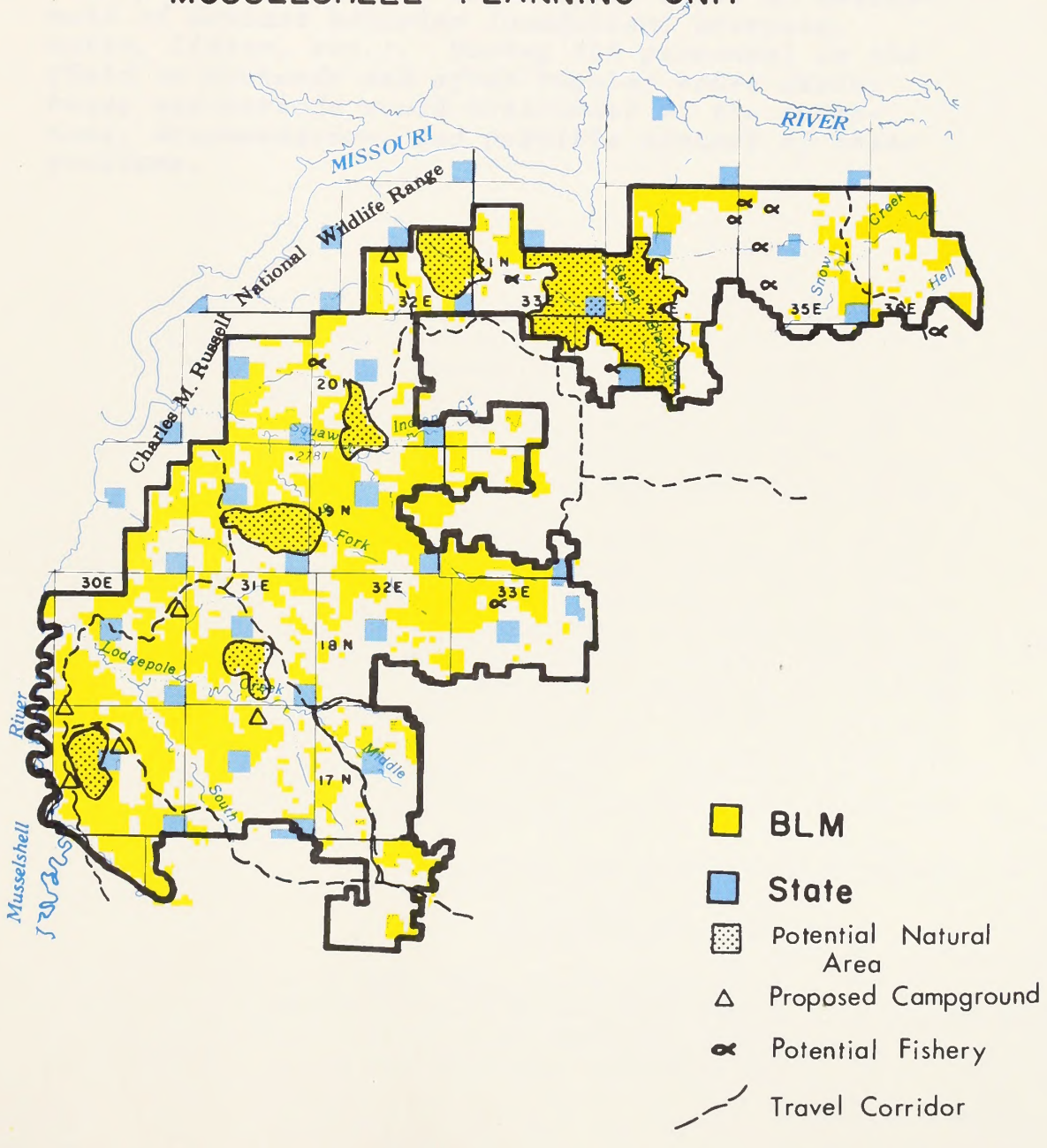
b. Cooperate with the state and county in a road construction and maintenance program based on public needs.

A reliable road system is needed in the planning unit, since existing dirt roads are impassible during wet weather, which restricts the functional utility of the resource and limits the season of use for recreationists. However, public resource use is presently not sufficient to justify a BLM-funded road improvement program.

c. Prepare an Off-road Vehicle (ORV) Master Plan for the planning unit.

RECREATION

MUSSELSHELL PLANNING UNIT



As the popularity of ORV use grows, a balanced ORV plan would assist BLM in alleviating a multitude of resource problems (soil erosion, trespass, harassment of livestock, vandalism, etc.) while providing opportunities for those people interested in this activity.

d. Authorize recreation and wildlife specialists to work irregular schedules during heavy use periods, especially during hunting season.

With public recreation there often comes an assortment of deviant behavior (vandalism, trespass, noise, litter, etc.). Having BLM personnel in the field on weekends and after regular hours during heavy use periods would contribute to the awareness, documentation, and possible control of these problems.

CULTURAL RESOURCES

Background

Little information is available concerning the prehistory of the Musselshell Planning Unit. Hence, many recommendations for inventory and research have been approved as decisions summarized here. Artifacts dated as belonging to the Early Prehistoric Period (10,000 B.C. to 5,500 B.C.) have been found in similar areas of the Northern Great Plains and potential for discovery of important prehistoric sites within this unit is good.

The advent of white man during the 18th Century marks the beginning of the Historic Period. Fur trade, trappers, and the Lewis and Clark expedition originally opened this area, followed by the Indian campaigns of the U.S. Army, the slaughter of buffalo, the large trail herds and open range livestock outfits and the homestead era. Most of the historic events are well-documented for this area.

The cultural resources program assumes that the primary value of prehistoric and historic sites is their potential for yielding information regarding past cultural systems. Many national laws and policy statements provide directives for the BLM's cultural resources program, the general objectives being identification, preservation, and utilization of significant sites and information.

A Class II cultural resource survey was conducted in the Musselshell Planning Unit in 1977. Six and one half (6½) percent of the acreage of public lands were intensively surveyed, covering a broad range of sites for planning purposes. Class III surveys are conducted prior to surface-disturbing project development. These areas are examined closely to determine their cultural value, since disturbing the soil often results in the loss or deterioration of the cultural resource. Significant discoveries are nominated to the National Register of Historic Places.

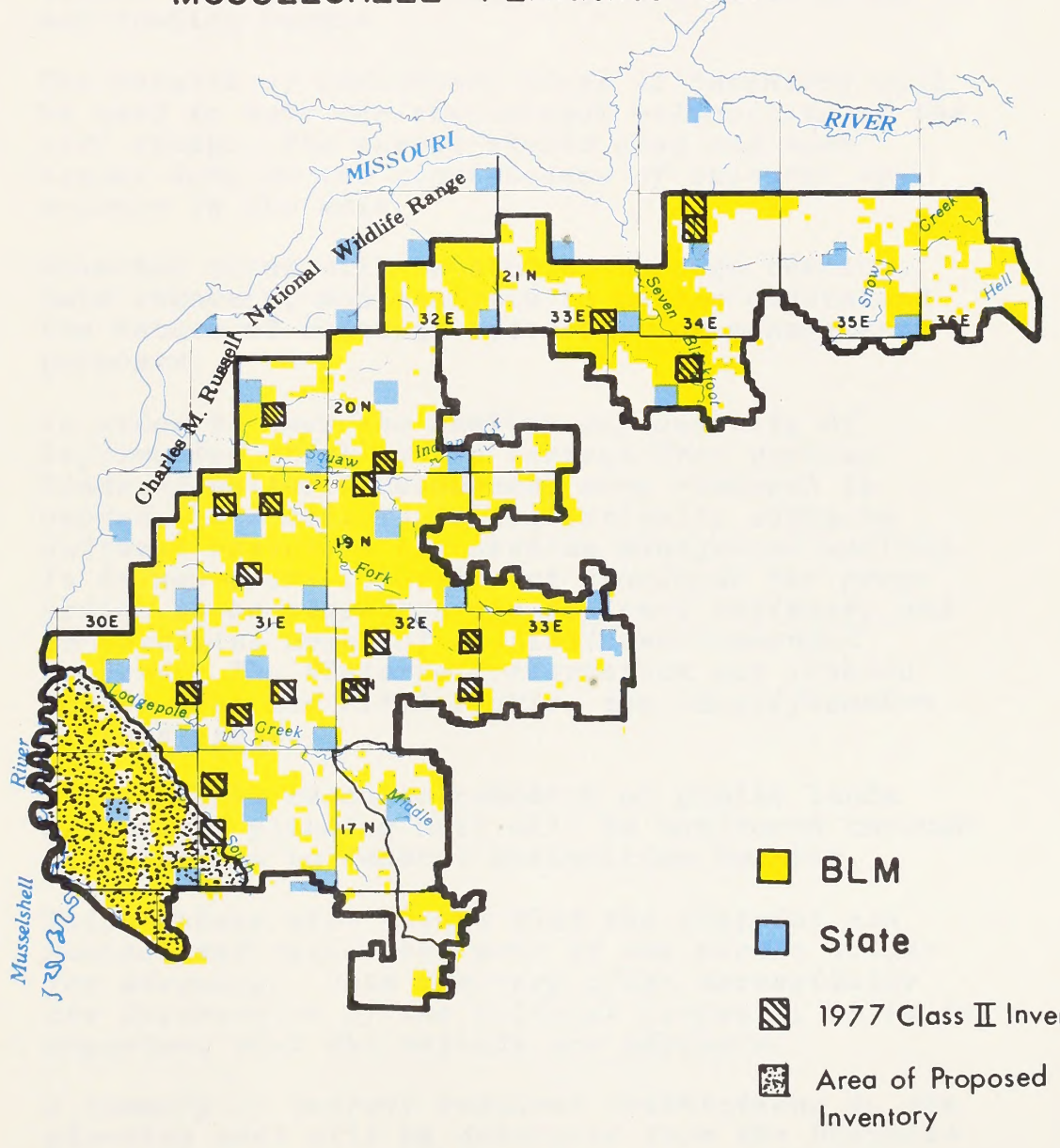
Resource Decisions and Rationale

1. Inventory and Research

    a. A summary of current research orientations in the planning unit will be developed from the District Class I inventory. This information will be used to evaluate research conducted in the unit.

CULTURAL RESOURCE INVENTORY

MUSSELSHELL PLANNING UNIT



b. A Class II cultural resource inventory will be completed on at least 6,000 acres of public land in the area between the Musselshell River, Calf Creek, and the South Fork of Lodgepole Creek (shown on map, page 49).

This area was not covered by the 1977 study, though analysis of other data indicates a good potential for site locations.

c. Class II inventory of public lands will be continued throughout the planning unit as manpower and funding permit.

The results of additional Class II inventory will be used to test the statistical reliability of the 1977 study. The survey should also add much needed data on the significance of cultural resources in the unit.

d. Selected sites will be studied through testing, data recovery, and analysis to better understand the nature of cultural resources for management purposes.

In order to know the quality and quantity of information which can be derived from various kinds of cultural resources, some research is needed. The ability to realistically evaluate cultural resources has obvious management utility. It is necessary to arrive at standards for properties to be placed on the National Register, and to determine areas of critical environmental concern. The Historic Preservation Act (Public Law 89-665) and FLPMA require the identification of such areas.

e. All cultural resource research on public lands within the planning unit will be monitored through stipulations to Federal Antiquities Permits.

Stipulations will insure that the District can monitor and review the work of the permit holder for adequacy. Data recovery often necessitates the destruction of the cultural property, so it is important that the methods are adequate.

A summary of current research orientations in the planning unit will be developed from the District Class I inventory. This information will be used to evaluate research conducted in the unit.

2. Protection

a. In all areas of the unit not previously inventoried, Class III inventories will be performed on all proposed project sites prior to surface disturbance, including Bureau and non-Bureau activities on public lands. In addition, Class III inventories will be conducted on lands being considered for disposal or exchange.

Class III inventories determine if prehistoric or historic sites may be affected by Bureau (or non-Bureau) action. Such inventories are required by the Historic Preservation Act (1966), Protection and Enhancement of Cultural Environment (Executive Order 11593), and NEPA. Most problems identified by these cultural resource surveys can be resolved by project redesign.

b. Cultural resources which appear qualified will be nominated to the National Register. Activity plans will be prepared for National Register sites.

The Bureau is required by national policy and law to nominate sites which appear to qualify for the National Register. Activity plans will insure that the integrity of the sites are maintained, and identify legitimate uses of the sites.

c. Action will be taken to protect the integrity of significant cultural resources which are deteriorating due to natural process or vandalism, as they become known. Data recovery will be initiated where protective actions are not effective.

Many cultural sites are on or near the surface where artifacts (relics) may easily be seen. Collection (illegal without Federal Permit) of these materials may significantly reduce the information potential of the sites, if not done in a professional manner. Control of amateur collecting is very difficult, and professional data recovery may be, in some cases, the best means of protecting the resource. Protection from natural erosion, grazing, etc., may require special techniques.

3. Recreation

The legitimate recreation potential of cultural resources will be evaluated.

For example, signing and interpretation of a buffalo jump which has been professionally excavated would constitute a recreation value of the cultural resource.

4. Visual Resource Management (VRM)

a. Conduct VRM contrast ratings on management activities proposed on lands in all VRM classes I through IV (see map, page 56).

b. Closely monitor the cumulative impacts of all management activities as they affect the visual resource.

c. Protect the visual resource along travel corridors. Wherever possible, locate any construction projects out of sight of the travel corridor.

d. Initiate revegetation programs on selected disturbed areas where current revegetation techniques indicate a reasonable chance for success, and natural revegetation is not feasible.

e. Wherever feasible, adverse impacts of identified significant intrusions will be reduced by project redesign, vegetative screening, removal, or other appropriate measures.

The visual resource has been recognized as an important element of the human environment. NEPA, FLPMA, and existing Bureau policy dictate that all public lands shall be managed to protect, maintain, enhance, and rehabilitate the visual resource. The contrast rating system is the only method available for evaluating proposed intrusion on visual quality. The landscape along travel corridors is especially sensitive to deterioration of visual resource quality, and these areas merit special attention. Revegetation programs and alternatives in project design and stipulations are ways of reducing the impacts of management activities on the visual resource.

CLASS A

CLASS B

CLASS C

These photos are classified as a part of VRM Inventory and Evaluation by Scenic Quality Rating of present conditions and trends in the area. Areas are rated on landform, color, water, vegetation, uniqueness, intrusions and placed in appropriate scenery class based on degree of scenic quality.

5. Natural Areas

a. As investigation of the five potential natural areas (see map, page 46) continues, activity plans proposed by other resource programs will be closely scrutinized by the recreation specialists to insure that the natural area potential of these areas is not damaged.

b. Recreation Management Plans (RMPs) will be developed for each site that is found to meet the requirements for formal designation as a natural area.

Bureau policy and FLPMA, along with documented recreation need, are justification for the proposal of natural areas. Present land uses in these areas of the planning unit are not expected to change substantially over the next decade; livestock grazing will continue without adverse impact. As BLM formally withdraws these areas for recreational purposes, management guides, referenced visitor use, resource conflict identification, development goals, and maintenance problems, can be covered by Recreation Management Plans.

6. Wilderness Areas

a. Field check those areas which are identified as being potentially suitable for wilderness designation, and document their suitability or unsuitability.

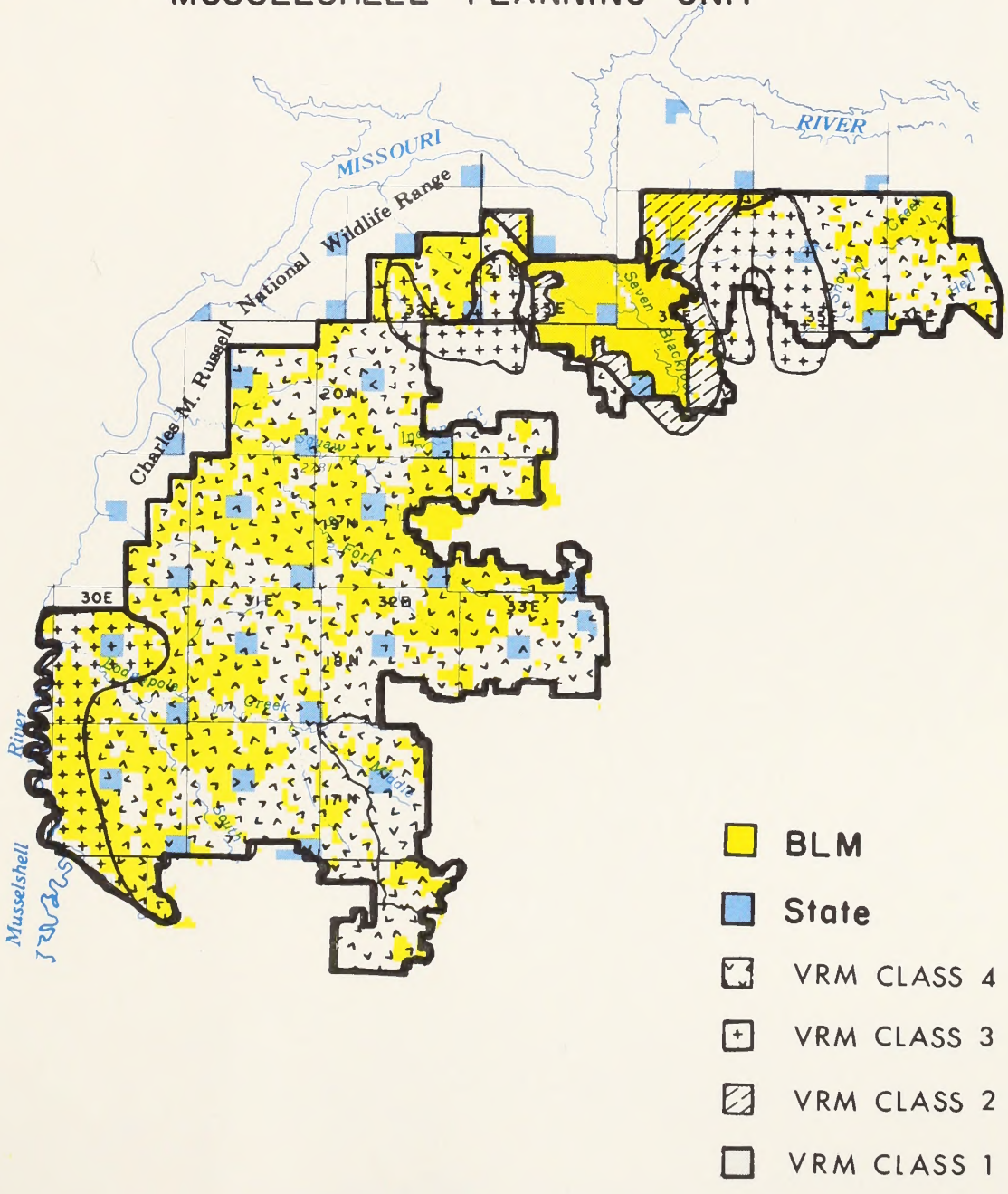
b. Management decisions will ensure that the wilderness character of the documented suitable areas are not impaired, pending congressional decision.

c. Submit the 18,000 + acre Seven Blackfoot Area (see map, page 46) for review as a potential Wilderness Area.

The Wilderness Act, FLPMA, and BLM manuals all provide directives and guidelines for the identification, study and withdrawal of qualified Wilderness Areas. The specific identification of qualified areas will allow concentration of wilderness study in appropriate areas, and remove unneeded constraints on other lands. BLM is required by

VISUAL RESOURCES

MUSSELSHELL PLANNING UNIT



law to manage all lands with wilderness characteristics so as not to impair their value, pending congressional designation. A series of District-level reports suggest that the Seven Blackfoot area may fit the wilderness category. Hence, the next step is to submit the area for study by the statewide wilderness review process.

Interrelationships With Other Plans

The Charles M. Russell National Wildlife Range (CMRNWR), managed by the U. S. Fish and Wildlife Service (USFWS), borders the northern part of the planning unit. Many ranch operations include allotments of public land administered by BLM as well as lands within the game range. The management framework plan (MFP) decisions, as outlined here, do not deal with the CMRNWR. However, the need for coordination of activity plans (especially grazing plans) between BLM and the USFWS is obvious. A new planning effort on the game range is being initiated by USFWS. As their decisions are finalized, cooperation between the two agencies will insure sound management of all public lands in the area.

MISSOURI RIVER BREAKS
GRAZING MANAGEMENT ENVIRONMENTAL STATEMENT

MFP Summary Area

CANADA

FORT BELKNAP INDIAN RESERVATION

PHILLIPS

VALLEY

N

LITTLE ROCKIES

SOUTH BEARPAW

ZORTMAN

UL BEND

WILLOW CREEK

McCONE

C. M. RUSSELL N.W.R.

C. M. RUSSELL N.W.R.

HAXBY

MUSSELSHELL

FERGUS

BELT MOUNTAINS

PETROLEUM

These areas, along with the C.M. Russell National Wildlife Range, are excluded from the Missouri Breaks Grazing Management Environmental Statement.

10 0 10 20 30 40

Miles

Actions After the MFP

The finalized management framework plan is the basis for on-the-ground actions in the Musselshell Planning Unit. These actions will be subject to the requirements of the National Environmental Policy Act, except for those which are non-discretionary due to other laws (i.e., wilderness review/ withdrawal, and endangered species protection).

Environmental assessments will address the environmental, wilderness, and socio-economic impacts of each proposed action, providing basis for its acceptance, modification, or rejection. The implementation of allotment management plans and issuance of BLM grazing licenses/permits will be the subject of the "Missouri River Breaks Grazing Environmental Statement," scheduled for completion in August 1979 by BLM Montana State Office, Branch of Environmental Coordination.

It may be some time before some of these MFP decisions are carried out, since on-the-ground actions to be initiated by BLM depend on Congressional funding. Implementation is also dependent upon completion of wilderness review as required by the Federal Land Policy and Management Act of 1976 (FLPMA).

Any major changes in this plan will be subject to public review and comment. It is anticipated that this plan will provide the basis for resource management to both the District and Resource Area staffs for approximately ten years. A program of resource inventory will continue to monitor any changes which may lead to modification of resource use. Significant changes in Federal, State or public policy or attitudes may also cause revision of this management framework plan.

The Musselshell, Haxby, and McCone Management Framework Plans provide management decisions and land use allocations for the vast majority of BLM lands within Garfield and McCone Counties. The central and southern portions of Garfield County have relatively scattered tracts of BLM lands and are included within the Jordan Planning Unit. This unit, together with eight other planning units (see map, page 6), comprise the balance of the Big Dry Resource Area. Preliminary inventory and planning efforts are currently underway for these nine units. The management framework plans and associated environmental statement are currently scheduled for completion by 1984.

Montana BLM Organization

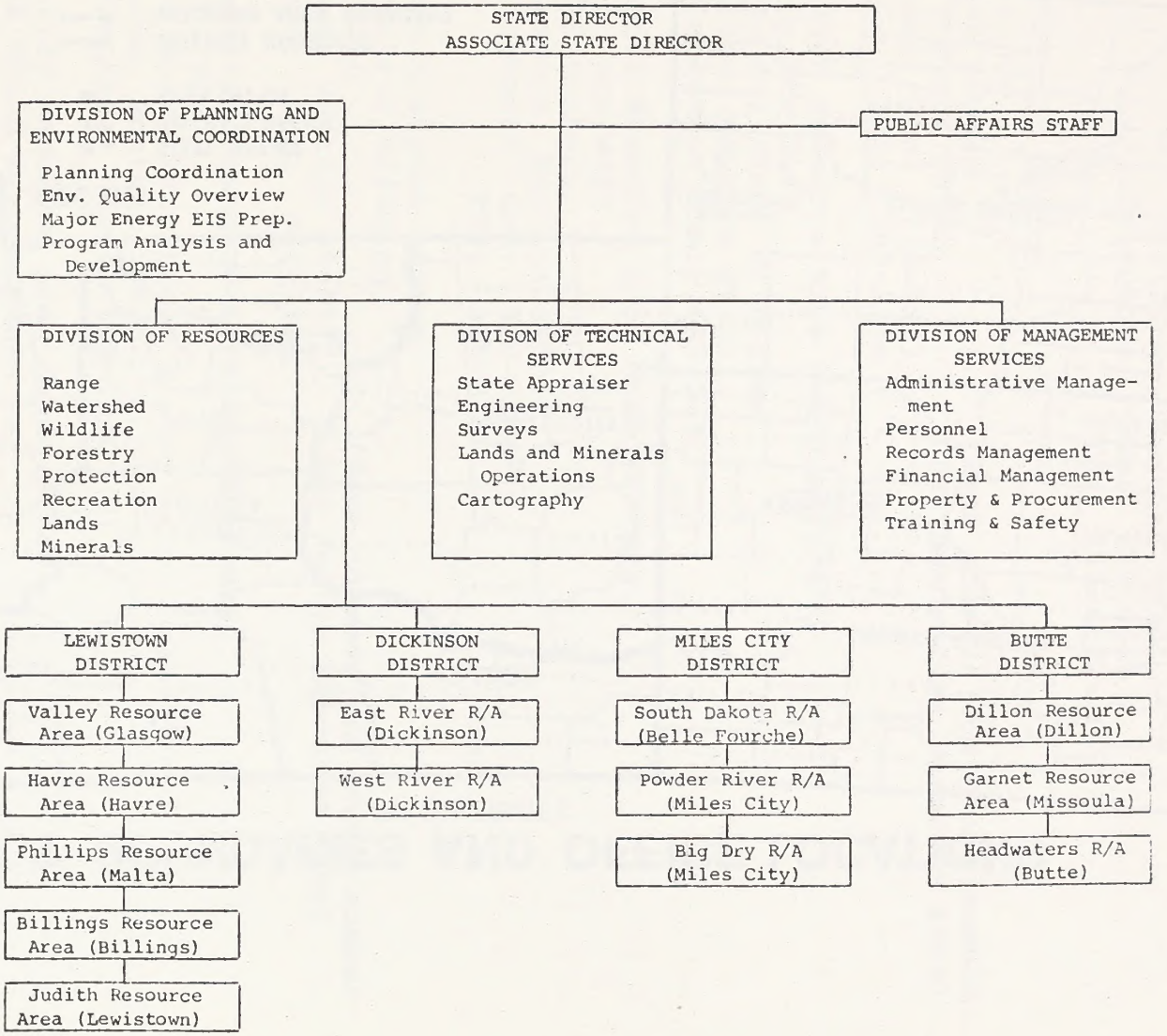
The Bureau's work in Montana, North Dakota, and South Dakota is administered from a State Office headquarters located in Billings, Montana. Within these three states, the 8.4 million surface acres and 55 million* subsurface acres of public lands are further divided administratively into four districts with District Offices in Butte, Lewistown, and Miles City; and Dickinson, North Dakota. Each District is divided into Resource Areas to facilitate day to day administration and long term management on a multiple use basis.

The surface and subsurface acreages administered by the four BLM Districts are noted in the table below:

ACREAGE STATISTICS
MONTANA BLM ORGANIZATION

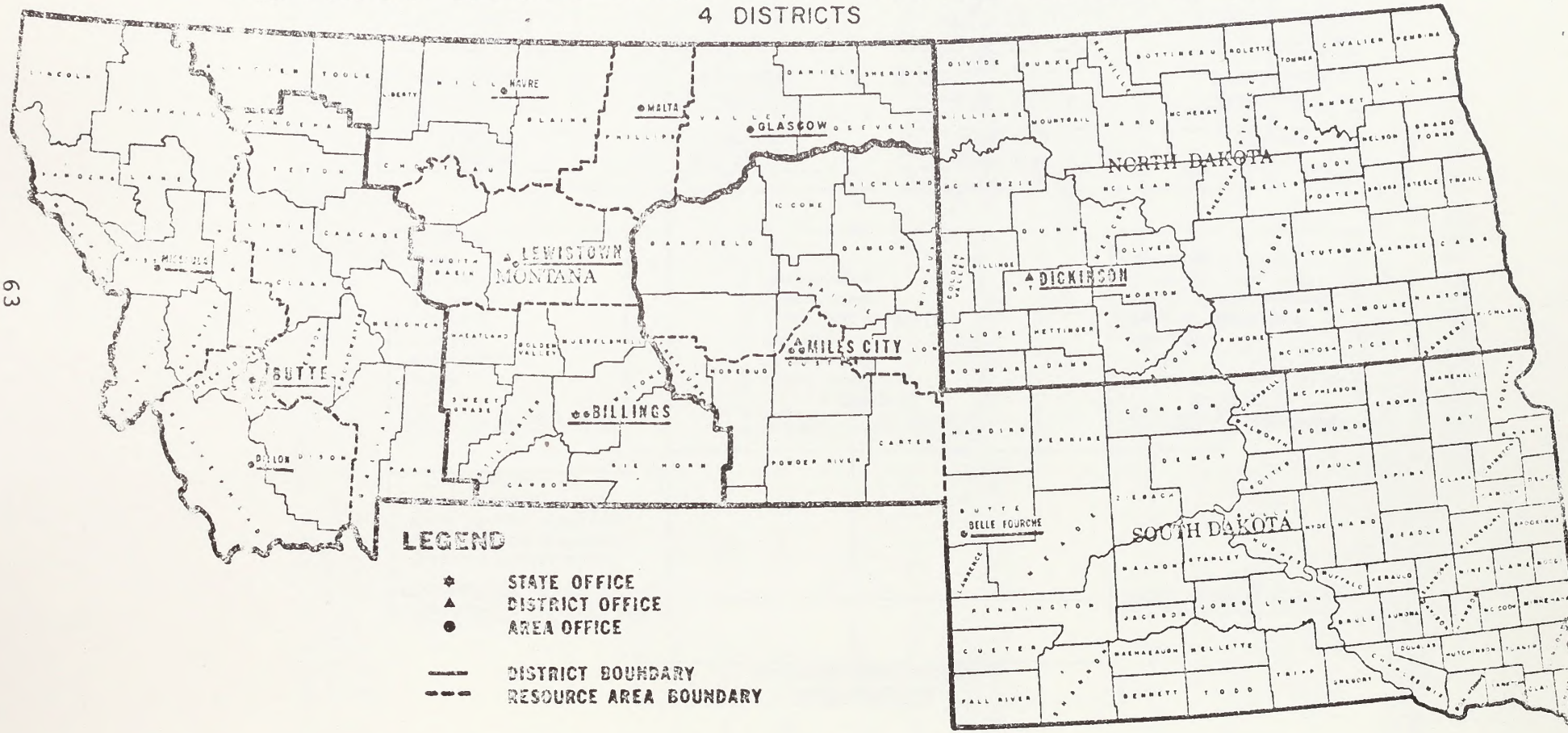
DISTRICT	SURFACE OWNERSHIP		SUBSURFACE OWNERSHIP		TOTAL ALL OWNERSHIP
	BLM	OTHER	BLM	OTHER	
Butte	1,334,000	33,456,400	2,285,345	32,505,054	34,790,400
Lewistown	3,884,701	33,167,885	8,177,983	28,879,603	37,057,586
Miles City Montana	2,785,299	17,363,119	10,910,741	9,237,677	20,148,418
S.Dakota	276,000	48,335,200	800,000	47,811,200	48,611,200
Dickinson	68,000	44,266,720	4,968,000	39,366,720	44,334,720

*BLM directly administers approximately 28 million acres of mineral estate and is the leasing agent to an additional 27 million acres of land administered by other federal agencies.


STATE DIRECTOR
ASSOCIATE STATE DIRECTOR
DIVISION OF PLANNING AND ENVIRONMENTAL COORDINATION
Planning Coordination
Env. Quality Overview
Major Energy EIS Prep.
Program Analysis and Development
PUBLIC AFFAIRS STAFF
DIVISION OF RESOURCES
Range
Watershed
Wildlife
Forestry
Protection
Recreation
Lands
Minerals
DIVISON OF TECHNICAL SERVICES
State Appraiser
Engineering
Surveys
Lands and Minerals Operations
Cartography
DIVISION OF MANAGEMENT SERVICES
Administrative Management
Personnel
Records Management
Financial Management
Property & Procurement
Training & Safety
LEWISTOWN DISTRICT
Valley Resource Area (Glasgow)
Havre Resource Area (Havre)
Phillips Resource Area (Malta)
Billings Resource Area (Billings)
Judith Resource Area (Lewistown)
DICKINSON DISTRICT
East River R/A (Dickinson)
West River R/A (Dickinson)
MILES CITY DISTRICT
South Dakota R/A (Belle Fourche)
Powder River R/A (Miles City)
Big Dry R/A (Miles City)
BUTTE DISTRICT
Dillon Resource Area (Dillon)
Garnet Resource Area (Missoula)
Headwaters R/A (Butte)

DISTRICT BOUNDARIES AND OFFICE LOCATIONS

4 DISTRICTS



ADDRESSES
Montana BLM Organization

Montana State Office
P.O. Box 30157
222 North 32 Street
Billings, Montana 59101
Telephone: Com: 657-6561
FTS: 585-6561

Butte District Office
P.O. Box 308
220 North Alaska
Butte, Montana 59701
Telephone: Com: 723-6561
FTS: 585-2416

(Same address and phone number for Headwaters Resource Area)

Dillon Resource Area Headquarters
P.O. Box 1048
Ibey Building, N. Dillon
Dillon, Montana 59725
Telephone: Com: 683-2337

Garnet Resource Area Headquarters
P.O. Box 4427
1819 Holborn
Missoula, Montana 59801
Telephone: Com: 329-3686
FTS: 585-3686

Lewistown District Office
Bank Electric Building
Drawer 1160
Lewistown, Montana 59457
Telephone: Com: 538-7461

(Same address and phone number for Judith Resource Area)

Phillips Resource Area Headquarters
P.O. Box B
501 South 2nd Street E
Malta, Montana 59538
Telephone: Com: 654-1240

Valley Resource Area Headquarters
626 Third Avenue South
Glasgow, Montana 59230
Telephone: Com: 228-4316

Billings Resource Area Headquarters
810 E. Main Street
Billings, Montana 59101
Telephone: Com: 657-6262
FTS: 585-6262

Havre Resource Area Headquarters
Post Office Building
Drawer 911
Havre, Montana 59501
Telephone: Com: 265-5891

Miles City District Office
P.O. Box 940
West of Miles City
Miles City, Montana 59301
Telephone: Com: 232-4331

(Same address and phone number for Powder River and Big Dry Resource Areas)

South Dakota Resource Area Headquarters
310 Roundup Street
Belle Fourche, South Dakota 57717
Telephone: Com: 892-2526

Dickinson District Office
P.O. Box 1229
Pulver Hall
Dickinson, North Dakota 58601
Telephone: Com: 225-9148

GLOSSARY

ACTIVITY PLAN. Detailed action plans for specific program activities. Examples include Allotment Management Plans, Habitat Management Plans, Recreation Site Development Plans, etc.

AESTHETICS. Dealing with the sense of the beautiful and with judgements concerning beauty.

ALLOTMENT (GRAZING ALLOTMENT). An area of land where one or more individuals graze their livestock. It generally consists of BLM lands but may include parcels of private or state owned lands. The number of livestock and season(s) of use are stipulated for each allotment. An allotment may consist of several pastures or be only one pasture.

ALLOTMENT MANAGEMENT PLAN (AMP). A concisely written program of livestock grazing management, including supportive measures if required, designed to attain specific management goals in a grazing allotment.

ANIMAL UNIT MONTH. A standardized unit of measurement of the amount of forage necessary for the complete sustenance of one animal unit for a period of one month; also a unit of measurement of grazing privileges which represents the privilege of grazing one animal unit for a period of one month.

CULTURAL RESOURCES. A term that includes resources of historical, archaeological, or architectural significance, which are fragile, limited, and nonrenewable portions of the human environment.

DEFERRED ROTATION GRAZING. The discontinuance of livestock grazing on various parts of a range in succeeding years, allowing each part to rest successively during the growing season to permit seed production, establishment of seedlings, or restoration of plant vigor.

ECOLOGY. A study of animals and plants in their relation to each other and to their environment.

ENDANGERED OR THREATENED STATUS. Determined for plants and animals by any one or a combination of the following factors: (1) the present or threatened destruction, modification, or curtailment of its habitat or range; (2) overutilization for commercial, sporting, scientific or educational purposes; (3) disease or predation; (4) the adequacy of existing regulatory mechanisms; or (5) other natural or man-made factors affecting its continued existence.

ENVIRONMENTAL ASSESSMENT RECORD (EAR). A concisely written record of environmental factors in land management actions.

ENVIRONMENTAL STATEMENT (ES). A written analysis of the impacts of a proposed project (e.g., grazing program) on the environment.

EXCLOSURES. An area protected (usually by fences) against the entrance of unwanted animals.

FEDERAL LAND POLICY AND MANAGEMENT ACT OF 1976 (FLPMA). Public Law 94-579, October 21, 1976, often referred to as the BLM "Organic Act" which provides the majority of BLM's legislated authority, direction, policy and basic management guidance.

FORAGE ALLOCATION. The percent of average annual forage production allocated in the land use decision process to a given activity (i.e., domestic livestock wildlife, water protection and enhancement, wild and free-roaming horses and burros).

IMPACT. Negative or positive effects on social, economic, institutional, environmental and other resource values.

LAND USE DECISIONS. Resource allocations which resolve on-the-ground conflicts generated by attempting to fully implement all activities on the same general area of land. The decision reflects social, economic, environmental, political, and interagency considerations.

MANAGEMENT FRAMEWORK PLAN (MFP). A planning decision document which establishes, for a given planning area, land use allocations, coordination guidelines for multiple use, and management objectives to be achieved for each class of land use or protection. It is the Bureau's land use plan. It is prepared in three steps: Step 1 - Resource Recommendations; Step 2 - Impact Analysis and Alternative Development; and Step 3 - Decision-making.

MULTIPLE USE MANAGEMENT. Coordinated management of the various surface and sub-surface resources, without permanent impairment of the productivity of the land, that will best meet the present and future needs of the people.

NON-DISCRETIONARY. Actions required by federal law, court or Executive Order, i.e., protection of designated, endangered, or threatened plants and animals, protection of designated historical or archaeological sites, etc.

PHENOLOGICAL. Relations between climate and periodic biologic phenomenon such as migrations and breedings of wildlife.

PLANNING UNIT. A geographic unit within a Bureau of Land Management district which includes related lands, resources, and use pressure problems which are considered together for resource inventory and planning.

RAPTORS. A functional group of birds including all birds of prey, such as the eagle, hawk, owl, and vulture.

RESOURCE ALLOCATION. See LAND USE DECISIONS.

RIPARIAN. Situated on or pertaining to the bank of a river, stream or other body of water.

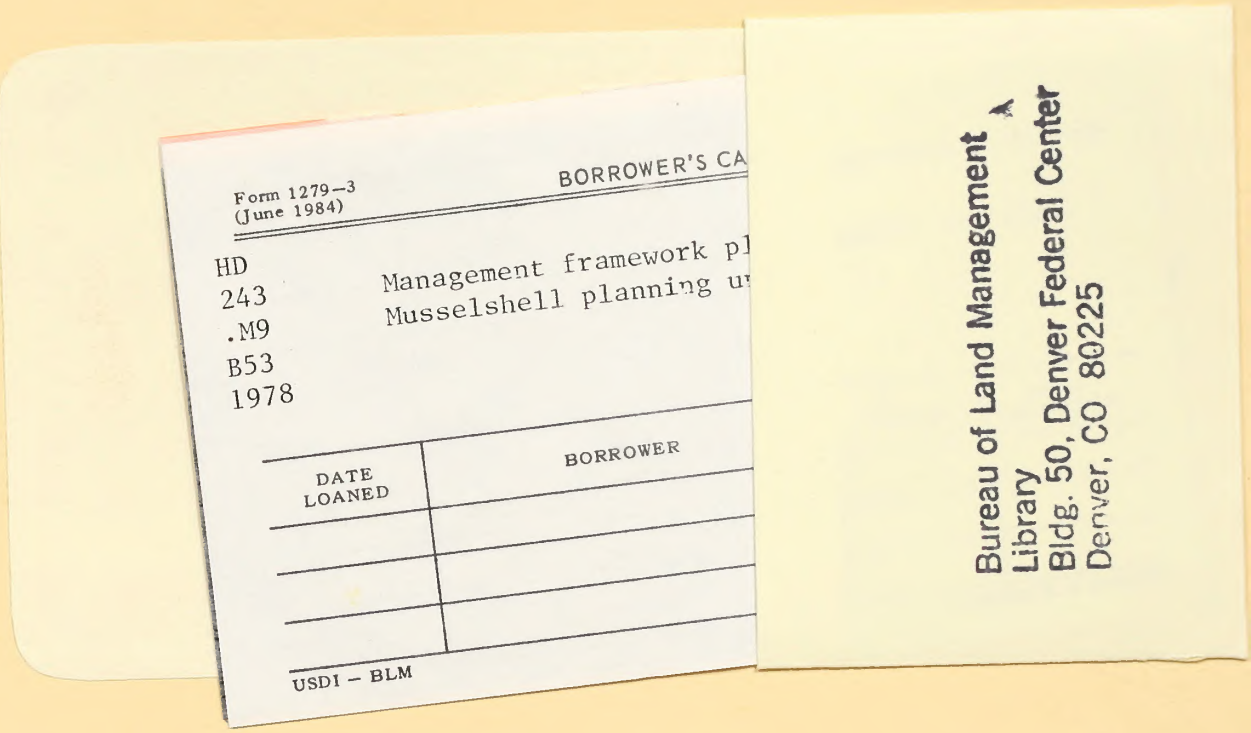
SILVICULTURAL. Theory and practice of controlling the establishment, composition, constitution, and growth of forests.

SUSTAINED YIELD. The achievement and maintenance in perpetuity of a high-level annual or regular periodic output of the various renewable resources of the public lands consistent with multiple use.

VISUAL RESOURCE MANAGEMENT CLASSES. Classification of landscapes according to the kinds of artificial structures and modifications which are acceptable to meet established visual goals.

WATERSHED. A basin or region draining into a creek, stream, river, river system, or body of water.

WITHDRAWAL. An action which withdraws described public lands from operation of certain laws which are also described in the withdrawal order.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Management framework pl
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Bureau of Land Management
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Denver, CO 80225